

FILE COPY

Circulate

File No.

19.309



**Coal Characterization of Illinois
No. 2, No. 3 and No. 5 Seam
Coals**

to

**U.S. Department of Energy
Pittsburgh, Pennsylvania
DE-FC22-90PC89663**

**Electric Power Research Institute
Palo Alto, California
RP1400-25**

**Coal Characterization of Illinois No. 2, No. 3
and No. 5 Seam Coals**

Prepared for:

**U.S. Department of Energy
Pittsburgh, Pennsylvania
DE-FC22-90PC89663**

**Electric Power Research Institute
Palo Alto, California
RP1400-25**

July 31, 1992

Prepared by:

Douglas E. McCollough

**CQ Inc.
One Quality Center
Post Office Box 280
Homer City, Pennsylvania 15748
(412) 479-3503**

Project No. 90D0101-03

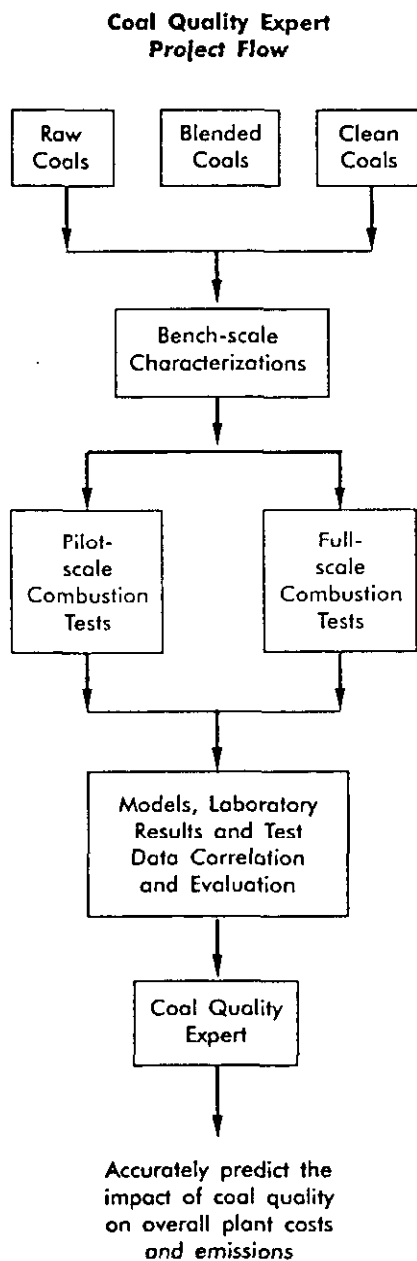
ACKNOWLEDGMENTS

Mr. Greg Henshaw of Southern Company Services, Inc., which co-funds the Clean Coal Technology project for which this characterization was performed, made important contributions to the data and results presented in this report. Mr. Henshaw made arrangements for mine and preparation plant visits to Jader Fuel Company's sites.

Table of Contents

<u>Section</u>	<u>Page</u>
EXECUTIVE SUMMARY	S-1
Project Tasks	S-1
Results	S-2
INTRODUCTION	1
Watson Generating Station Test Program	1
CQ Inc. Investigations	2
GENERAL TESTING METHODOLOGY AND RESULTS	4
Raw-Coal Characterization	4
Impurities Liberation Potential	11
Laboratory Froth Flotation Testing	22
Coal-Cleaning Evaluation	26
CONCLUSIONS	41

EXECUTIVE SUMMARY



Project Tasks

CQ Inc., a wholly-owned subsidiary of the Electric Power Research Institute (EPRI), performed a Coal Cleanability Characterization on 150 tons each of Illinois No. 2, 3, and 5 Seam coals. Coal for this test program was purchased from Jader Fuel Company's Jader No. 4 Mine located in Gallatin County, Illinois. The work was performed in early 1991 as part of a Clean Coal Technology project sponsored by the Department of Energy and the Electric Power Research Institute. The objective of the project is to develop a sophisticated computer model, the Coal Quality Expert, that will help to reduce power plant emissions and power production costs.

The project is a logical and essential extension of extensive R&D performed in the past under sponsorship of EPRI and the Department of Energy (DOE). The 42-month project, managed by CQ Inc. and ABB Combustion Engineering Systems Division, will demonstrate the economic and environmental benefits of coal cleaning to enhance the use of U.S. coals for electrical power generation. The work falls under DOE's Clean Coal Technology Program in the category of "Advanced Coal Cleaning."

The main objectives of this project are to:

- Enhance EPRI's Coal Quality Information System database and Coal Quality Impact Model to allow confident assessment of the effect of cleaning on specific boiler cost and performance.
- Develop and validate a computer workstation, called the Coal Quality Expert, which allows accurate and - detailed predictions of coal quality impacts on total power plant capital cost, operating cost, and performance based on inputs from inexpensive bench tests.

The project consists of seven tasks:

Task 1: Project Management

Task 2: Coal Cleanability Characterization

Task 3: Pilot-Scale Combustion Testing

Task 4: Utility Boiler Field Testing

Task 5: CQIM Completion and Development of CQE Specifications

Task 6: CQE Development

Coal Cleanability Characterizations are comprised of five segments:

- Raw Coal Characterization
- Impurities Liberation Testing
- Laboratory Froth Flotation
- Commercial-scale Flowsheet Testing
- Combustion Characteristics Comparison

Results

Task 7: CQE Workstation Testing and Validation

CQ Inc. owns and operates the Coal Quality Development Center (CQDC), located 50 miles east of Pittsburgh, Pennsylvania. One portion of the research and development at CQ Inc. involves such characterizations, which determine a coal's response to cleaning as defined by a five-part test program.

The raw-coal characterization shows that the Illinois No. 2, 3, and 5 Seam coals are all high volatile A bituminous coals. Slagging indices for the Illinois No. 2, and 5 Seam coals were severe while the slagging index for the Illinois No. 3 Seam coal was high. The fouling indices for the Illinois No. 2, and 3 Seam coals were low while the slagging index for the Illinois No. 5 Seam coal was medium. SO₂ emissions potentials for Illinois No. 2, 3, and 5 Seam coals were 8.26 lb/MBtu, 7.33 lb/MBtu and 7.77 lb/MBtu, respectively. The ash loadings for the Illinois No. 2, 3, and 5 Seam coals were 11.23 lb/MBtu, 17.88 lb/MBtu, and 13.80 lb/MBtu, respectively.

No great amount of impurities liberation occurred in any of the raw coals until they were crushed to 28 mesh. The coal cleaning evaluation shows that cleaning can improve the quality of a blend of Illinois No. 2, 3, and 5 Seam coals but with moderate yield (71-80 percent) and only moderate energy recovery (81-91 percent). Moreover, even though coal quality can be improved with cleaning, the SO₂ potential cannot be reduced below the 1.2 lbs/MBtu requirement of the 1990 Clean Air Act Amendments because of the high organic sulfur (1.64-1.96 percent on dry basis) still contained in the clean coal. Cleaning the raw coal blend reduced the slagging index classification from a classification of severe to medium. The fouling index was virtually unchanged from 0.17 to 0.11 in Test 1, from 0.11 to 0.10 in Test 2.

The data from this characterization will be incorporated into two of the more than 20 software models and databases that will be integrated to form the Coal Quality Expert:

- EPRI's Coal Quality Information System (CQIS), a database of coal characteristics and cleaning potential.
- The Quality Impact Model (CQIM), a commercial program that gives the bottom-line cost of burning a given coal in a particular boiler.

INTRODUCTION



Barge Unloading Dock at Watson Station. Barges carry clean coal down the Mississippi Power Company's Watson Station.

Watson Generating Station Test Program

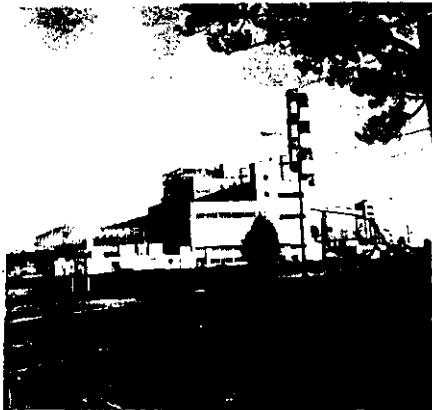
CQ Inc.'s Coal Quality Development Center (CQDC) is a 25-tph commercial-scale coal cleaning facility involved in the development and demonstration of coal cleaning processes and systems. It provides utilities with information that allows a realistic evaluation of various coal supply options. The CQDC also characterizes important coal seams for their raw coal quality characteristics and amenability to cleaning.

For the Coal Quality Expert (CQE) project, which is developing a complex, integrated expert system to accurately determine the performance and emissions costs of coal-fired power generation, CQDC engineers characterized the Illinois No. 2, 3, and 5 Seam coals from Jader Fuels's Jader No. 4 Mine in Gallatin County, Illinois. Currently, these seams of coal are cleaned individually at the Jader Fuels Company's preparation plant located near the surface mine. The preparation plant consists of a coarse coal jig for cleaning coarse material and a water-only cyclone for cleaning the fine size material. Individual cleaned coals are then blended together on an approximately equal basis with a slightly larger percentage of No. 2 Seam coal before shipping to Mississippi Power Company's Watson Generating Station in Gulfport, Mississippi.

For this study 150 tons each of the Illinois No. 2, 3, and 5 Seam coals were purchased from Jader Fuels. The characterization, which was performed in March and April 1991, had two major objectives:

- To determine the extent to which crushing the raw coal liberates ash-forming minerals, including pyritic sulfur.
- To determine the extent to which this coal can be economically cleaned.

Mississippi Power Company's Watson Generating Station is one of six host utilities involved in the CQE project. Watson Generating Station in the past has supplemented the Illinois blended coal with a West Kentucky No 11 Seam coal from Island Creek Coal Company but experienced slagging and fouling problems when burning the West Kentucky No. 11 Seam coal. Because the Illinois seam blend has very similar properties and does not experience any slagging and fouling problems, the Illinois Seam blend was chosen as the base coal for the CQE field tests. Full-



Mississippi Power Company's Jack Watson Steam Plant in Fulgport, Mississippi. This is the site of CQE's second field test.

CQ Inc. Investigations

scale test burns on Unit No. 4 at Watson Generating Station were performed to compare West Kentucky No. 11 Seam coal with the base Illinois coal blend to determine the cause of slagging and fouling when firing West Kentucky No. 11 coal.

The CQ Inc. raw coal characterization and cleaning tests also helped to determine what caused the slagging and fouling and to what extent cleaning reduces the potential for slagging and fouling. For this project two flowsheet tests were performed to investigate the effect of levels of cleaning on slagging and fouling. One flowsheet produced a highly clean coal and the other flowsheet produced a coal not as clean as the commercially cleaned coal used at the Watson Generating Station.

For this test program, CQ Inc. engineers followed EPRI's Coal Cleanability Characterization procedures. EPRI developed the concept of coal characterizations in 1983 and since then over 35 coals have been tested using this set of procedures. To date over 100 raw and clean coal data sets have been obtained for EPRI's Coal Quality Information System (CQIS). The CQE project has provided the opportunity to expand CQIS with data on coals from new geographic areas and/or coals that can cause and/or prevent problems at power plants.

Table 1 summarizes the CQ Inc. investigations conducted for this test program and the information determined by each one.

Table 1. Investigations and Determinations.

<u>Investigations</u>	<u>Determinations</u>	<u>Nature of Study</u>
RAW-COAL CHARACTERISTICS	<ul style="list-style-type: none">• Raw-Coal Quality• Coal Rank• Size Distribution• Washability Analyses	Laboratory Analysis
IMPURITIES LIBERATION POTENTIAL	<ul style="list-style-type: none">• Reduced Size Distribution• Additional Ash and Sulfur Liberation• Theoretical Quality Versus Yield Relationship	Laboratory Analysis
LABORATORY FROTH FLOTATION TESTING	<ul style="list-style-type: none">• Fines Floatability• Possible Quality• Reasonable Reagent Requirements	Laboratory Analysis
CQDC COAL-CLEANING EVALUATION	<ul style="list-style-type: none">• Actual Yield and Quality Production• Refuse Quality and Characteristics	25 tph Commercial-Scale Cleaning Plant
COMBUSTION CHARACTERISTICS COMPARISON	<ul style="list-style-type: none">• Raw Versus Clean Quality• Changes in Slagging Potential• Changes in Fouling Potential• Changes in Grindability• Changes in Moisture and Heating Value• Change in SO₂ Emission Potential	Laboratory Analysis and Theoretical Calculations

GENERAL TESTING METHODOLOGY AND RESULTS

The five segments of a Coal Cleanability Characterization provide data for a Coal Quality Information System entry. EPRI's Coal Quality Information System (CQIS) is a coal-quality database that utilities can use to determine the best available coal to burn in their plants, given their plant characteristics, location, and emissions limits. CQIS includes raw-coal and clean-coal characterizations, liberation data, and combustion characteristics for the more than 35 coals tested at CQ Inc.'s Coal Quality Development Center (CQDC). Other public information is also being sought for incorporation into the database. CQIS has blending, search/sort, and graphics capabilities.

For this test program, there were two flowsheet tests to determine the extent that impurities can be removed from a blend of Illinois 2, 3, and 5 Seam coals.

Raw-Coal Characterization

Characterization of the as-received raw coal provides information that can be used to compute slagging and fouling indices and other ash parameters of interest in power plant operations. It also provides the theoretical yield-quality relationships needed to determine improvements achieved by cleaning.

A raw coal sample of approximately seven tons was collected of each Illinois Seam coal at the CQDC primary sampler. Each sample was split into two subsamples. One split was used for raw-coal analysis and the other for liberation testing. Table 2 gives the raw coal analysis performed for each seam.

Tables 3 and 4 give the raw coal and raw coal ash analyses, respectively. Calculated indices indicate that the Illinois No. 2 and No. 5 raw coals both have a severe slagging potential and the Illinois No. 3 raw coal has a high slagging potential. Calculated indices show that the Illinois No. 2 and 3 fouling potentials are both low and the fouling potential of Illinois No. 5 is medium. All three raw coals are high volatile A bituminous coals per ASTM Standard D-388. Raw coal sizes and composite washability analyses for each coal are given in Tables 5 through 10.

The raw-coal characterization, as expected, shows decreasing coal quality with increasing specific gravity. The results of the detailed washability for each seam are shown in

Table 2. Raw-Coal Characterization. (As-Received Sample)

Proximate, Sulfur, Btu*	x
Ultimate	x
Sulfur Forms	x
Ash Fusion (reducing and oxidizing)	x
Ash Composition	x
Grindability Index (HGI)	x
Chlorine	x
Size Analysis	
+3-in	x
3-in x 1 1/2-in	x
1 1/2-in x 3/4-in	x
3/4-in x 3/8-in	x
3/8-in x 28 mesh	x
28 mesh x 100 mesh	x
100 mesh x 200 mesh	x
200 mesh x 0	x
Ash, sulfur, Btu* on each size fraction	x
Float/sink each size fraction at 1.25, 1.30, 1.35, 1.40, 1.60, 1.80, 2.0, 2.45	x
Ash, sulfur, Btu* on each size/gravity fraction	x

* Heating Value (Btu/lb) - dry basis

Table 3. Raw Coal Analysis. Illinois No. 2, 3, and 5 Seam Coals, Gallatin County, Illinois.

	<u>Illinois Raw Coal 2</u>	<u>Illinois Raw Coal 3</u>	<u>Illinois Raw Coal 5</u>
PROXIMATE ANALYSIS (As-received Basis/Dry Basis)			
Ash (Wt%)	13.0/14.5	19.1/20.7	15.4/16.8
Volatile Matter (Wt%)	30.5/33.8	30.2/32.7	32.0/35.0
Fixed Carbon (Wt%)	46.6/51.7	42.9/46.5	44.1/48.1
Total Moisture (Wt%)	9.9	7.9	8.5
Total Sulfur	4.75/5.27	3.92/4.25	4.34/4.74
Pyritic Sulfur (Wt%)	3.28/3.64	2.51/2.73	2.71/2.96
Pyritic/Total (%)	69.1	64.2	62.4
Sulfate (Wt%)	0.18/0.20	0.14/0.15	0.09/0.10
Organic (Wt%)	1.29/1.43	1.27/1.37	1.54/1.68
Heating Value (Btu/lb)	11,507/12,766	10,684/11,596	11,163/12,194
MAF Heating Value (Btu/lb)	14,922	17,238	14,662
Chlorine	0.28/0.31	0.34/0.36	0.26/0.28
SO ₂ (lb/MBtu)	8.26	7.33	7.77
Hardgrove Grindability Index (HGI)	62	56	61
ULTIMATE ANALYSIS (As-received Basis/Dry Basis)			
Carbon (Wt%)	62.80/69.67	59.7/64.8	61.9/67.7
Hydrogen (Wt%)	4.04/4.48	4.2/4.6	4.5/4.7
Nitrogen (Wt%)	1.18/1.31	1.1/1.2	1.1/1.2
Oxygen (Wt%)	4.34/4.82	4.2/4.5	4.5/4.9
ASH FUSIBILITY (deg F) (Reducing/Oxidizing)			
Initial Deformation	1960/2515	2015/2435	1985/2285
Softening	2000/2550	2030/2480	2040/2340
Hemi-Spherical	2130/2570	2100/2515	2120/2400
Fluid	2300/2580	2240/2555	2200/2435

Table 4. Raw Coal Analysis of Ash. Illinois No. 2, 3, and 5 Seam Coals, Gallatin County, Illinois. (Dry basis)

ASH COMPOSITION (Expressed as Oxides)	Illinois No. 2 Raw Coal			Illinois No. 3 Raw Coal			Illinois No. 5 Raw Coal		
	Proportion of:			Proportion of:			Proportion of:		
	Dry Ash(%)	Dry Coal (%)	(lb/MBtu)	Dry Ash(%)	Dry Coal (%)	(lb/MBtu)	Dry Ash(%)	Dry Coal (%)	(lb/MBtu)
SiO ₂	42.39	6.13	4.80	44.78	9.28	8.01	38.89	6.55	5.37
Al ₂ O ₃	15.45	2.23	1.75	20.20	4.19	3.61	12.15	2.04	1.68
Fe ₂ O ₃	34.57	5.00	3.91	23.53	4.88	4.21	25.84	4.35	3.57
CaO	1.55	0.22	0.18	4.61	0.96	0.82	7.37	1.24	1.02
MgO	0.76	0.11	0.09	1.39	0.29	0.25	3.29	0.55	0.45
Na ₂ O	0.17	0.02	0.02	0.31	0.06	0.06	0.58	0.10	0.08
K ₂ O	1.62	0.23	0.18	2.05	0.42	0.37	1.57	0.26	0.22
TiO ₂	0.80	0.12	0.09	0.97	0.20	0.17	0.60	0.10	0.08
MnO ₂	0.03	0.00	0.00	0.07	0.01	0.01	0.19	0.03	0.03
P ₂ O ₅	0.83	0.12	0.09	0.40	0.08	0.07	0.00	0.00	0.00
SO ₃	1.27	0.18	0.14	2.65	0.55	0.47	7.49	1.26	1.03
Unknown	0.56	0.08	0.06	-0.96	-0.20	-0.17	2.03	0.34	0.28
	100.00	14.45	11.32	100.00	20.73	17.88	100.00	16.83	13.80
CALCULATED INDICES									
Silica Ratio		0.53		0.60			0.52		
Base-To-Acid Ratio		0.66		0.48			0.75		
Ash (lb/MBtu)		11.3		17.9			13.8		
Slagging Index (Rs)		3.48		2.06			3.55		
Classification		SEVERE		HIGH			SEVERE		
Fouling Index (Rf)		0.11		0.15			0.43		
Classification		LOW		LOW			MEDIUM		
Critical Viscosity									
Temperature (deg F)		2411		2170			2950		
Slag Viscosity * (Poise)									
at 2,300 deg F		169		390			88		
at 2,600 deg F		18		44			14		

* Calculated values; ash viscosity data was not experimentally determined.

Slagging Index Classification		Fouling Index Classification	
Low	$R_s < 0.6$	Low	$R_f < 0.2$
Medium	$0.6 < R_s < 2.0$	Medium	$0.2 < R_f < 0.5$
High	$2.0 < R_s < 2.6$	High	$0.5 < R_f < 1.0$
Severe	$2.6 < R_s$	Severe	$1.0 < R_f$

Table 5. Raw-Coal Size Analysis. *Illinois No. 2 Seam Coal, Gallatin County, Illinois.*

Size		Direct				Cumulative			
<u>Passed</u>	<u>Retained</u>	<u>Weight (Wt %)</u>	<u>Ash (Wt %)</u>	<u>Sulfur (Wt %)</u>	<u>Heating Value (Btu/lb)</u>	<u>Weight (Wt %)</u>	<u>Ash (Wt %)</u>	<u>Sulfur (Wt %)</u>	<u>Heating Value (Btu/lb)</u>
	3-in	2.20	26.68	13.78	10,413	2.20	26.68	13.78	10,413
3-in	1 1/2-in	3.96	19.69	10.27	11,884	6.16	22.19	11.53	11,358
1 1/2-in	3/4-in	23.97	12.40	6.05	13,116	30.13	14.40	7.17	12,757
3/4-in	3/8-in	22.24	11.06	4.62	13,384	52.37	12.98	6.09	13,023
3/8-in	28M	36.49	15.06	4.54	12,586	88.87	13.84	5.45	12,843
28M	100M	5.74	15.92	4.39	12,243	94.60	13.96	5.39	12,807
100M	200M	1.17	26.69	6.69	10,448	95.78	14.12	5.40	12,778
200M		4.22	25.89	4.46	10,679	100.00	14.62	5.36	12,689

Table 6. Raw-Coal Composite Washability Analysis. *Illinois No. 2 Seam Coal, Gallatin County, Illinois.*

Specific Gravity		Direct				Cumulative Float			
<u>Sink</u>	<u>Float</u>	<u>Weight (Wt %)</u>	<u>Ash (Wt %)</u>	<u>Sulfur (Wt %)</u>	<u>Heating Value (Btu/lb)</u>	<u>Weight (Wt %)</u>	<u>Ash (Wt %)</u>	<u>Sulfur (Wt %)</u>	<u>Heating Value (Btu/lb)</u>
	1.250	1.67	2.63	1.86	14,684	1.67	2.63	1.86	14,684
1.250	1.300	38.60	4.44	2.19	14,419	40.27	4.36	2.18	14,430
1.300	1.350	29.07	7.93	2.95	13,849	69.34	5.86	2.50	14,186
1.350	1.400	9.17	12.26	4.23	13,072	78.51	6.61	2.70	14,056
1.400	1.600	7.44	17.06	5.56	12,229	85.95	7.51	2.95	13,898
1.600	1.800	2.11	23.83	7.88	10,868	88.07	7.90	3.07	13,825
1.800	2.000	0.89	36.28	13.08	8,577	88.96	8.19	3.17	13,773
2.000	2.450	2.09	55.62	15.96	5,385	91.06	9.28	3.46	13,580
2.450		8.93	72.75	22.84	2,438	99.99	14.95	5.19	12,689

Table 7. Raw-Coal Size Analysis. Illinois No. 3 Seam Coal, Gallatin County, Illinois.

Size		Direct				Cumulative			
Passed	Retained	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)
	3-in	4.80	27.33	5.67	10,459	4.80	27.33	5.67	10,459
3-in	1 1/2-in	21.48	20.56	4.68	11,754	26.28	21.80	4.86	11,517
1 1/2-in	3/4-in	26.71	18.43	3.92	12,102	52.99	20.10	4.39	11,812
3/4-in	3/8-in	22.56	20.09	3.81	11,780	75.55	20.10	4.21	11,803
3/8-in	28M	20.56	26.33	3.97	10,723	96.11	21.43	4.16	11,572
28M	100M	2.14	24.75	4.12	10,893	98.25	21.50	4.16	11,557
100M	200M	0.63	27.97	5.15	10,332	98.88	21.54	4.17	11,549
200M		1.12	31.80	4.81	9,795	100.00	21.66	4.17	11,529

Table 8. Raw-Coal Composite Washability Analysis. Illinois No. 3 Seam Coal, Gallatin County, Illinois.

Specific Gravity		Direct				Cumulative Float			
Sink	Float	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)
	1.250	0.16	3.12	1.38	14,551	0.16	3.12	1.38	14,551
1.250	1.300	17.15	5.08	1.83	14,321	17.30	5.06	1.83	14,323
1.300	1.350	35.57	8.43	2.51	13,794	52.87	7.33	2.29	13,967
1.350	1.400	16.13	12.25	3.72	13,160	69.00	8.48	2.62	13,778
1.400	1.600	11.27	18.25	5.54	12,081	80.26	9.85	3.03	13,540
1.600	1.800	2.69	34.83	7.05	9,089	82.96	10.66	3.16	13,396
1.800	2.000	1.81	46.25	7.50	6,823	84.77	11.42	3.25	13,255
2.000	2.450	4.33	69.75	6.47	2,576	89.10	14.26	3.41	12,736
2.450		10.90	80.74	9.89	1,189	100.00	21.50	4.12	11,478

Table 9. Raw-Coal Size Analysis. *Illinois No. 5 Seam Coal, Gallatin County, Illinois.*

Size		Direct				Cumulative			
Passed	Retained	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)
	3-in	10.26	16.07	7.13	12,294	10.26	16.07	7.13	12,294
3-in	1 1/2-in	11.85	15.20	5.90	12,428	22.10	15.61	6.47	12,366
1 1/2-in	3/4-in	28.42	12.99	4.80	12,965	50.52	14.13	5.53	12,703
3/4-in	3/8-in	16.45	14.11	4.45	12,733	66.97	14.13	5.27	12,711
3/8-in	28M	21.78	20.78	4.67	11,662	88.75	15.76	5.12	12,453
28M	100M	4.91	22.49	5.04	11,213	93.67	16.11	5.12	12,388
100M	200M	1.52	31.35	5.32	9,543	95.19	16.36	5.12	12,343
200M		4.81	40.99	3.39	8,159	100.00	17.54	5.04	12,141

Table 10. Raw-Coal Composite Washability Analysis. *Illinois No. 5 Seam Coal, Gallatin County, Illinois.*

Specific Gravity		Direct				Cumulative Float			
Sink	Float	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)	Weight (Wt %)	Ash (Wt %)	Sulfur (Wt %)	Heating Value (Btu/lb)
	1.250	1.09	3.71	2.28	14,400	1.09	3.71	2.28	14,400
1.250	1.300	27.77	4.15	2.45	14,365	28.86	4.13	2.44	14,366
1.300	1.350	33.71	9.39	2.92	13,541	62.57	6.96	2.70	13,922
1.350	1.400	11.30	14.01	3.87	12,780	73.87	8.04	2.88	13,747
1.400	1.600	8.52	19.17	6.03	11,686	82.39	9.19	3.21	13,534
1.600	1.800	3.89	28.95	7.98	9,817	86.28	10.08	3.42	13,366
1.800	2.000	2.44	39.91	10.94	7,685	88.73	10.91	3.63	13,210
2.000	2.450	2.92	51.88	15.29	5,624	91.65	12.21	4.00	12,968
2.450		8.35	73.70	16.71	2,131	100.00	17.34	5.06	12,063

Figures 1 through 3 for yield, ash, and sulfur versus cumulative float specific gravity, respectively. The complete set of washability data for each seam is given in Appendix A. The yield curves are relatively flat above specific gravities of 1.60, showing that as these coals are cleaned at specific gravities down to 1.60, expected ash content can be lowered at a slight decrease in yield. At low specific gravities, less than 1.40, ash and sulfur decrease greatly, but at the expense of yield.

Ash fusibility and ash composition analyses were also conducted on the raw coal of each seam and the clean coal produced from an equal blend of these three seams using two flowsheet tests. These analyses provided the data for comparing calculated combustion parameters for the raw coal with the cleaned coals.

Impurities Liberation Potential

Impurities must first be freed from the combustible coal mass before they can be removed by physical coal cleaning processes. Crushing the coal to finer topsizes makes it possible to increase impurities liberation and consequently impurities removal during cleaning.

In this program samples of the Illinois No. 2, 3, and 5 Seam as-received raw coals were analyzed thoroughly for their physical and chemical properties. Complete size and washability analyses were performed on each seam to determine the existing, or as-received, state of liberation. A sample split was also prepared in the laboratory and crushed to topsizes of 1-1/2-in., 3/4-in., 3/8-in., 28 mesh, and 100 mesh. These samples underwent size and washability analyses to determine the impact of crushing on the impurities liberation and the yield-quality relationship. The washability analyses for these samples are given in Appendix A.

Illinois No. 2 Seam Coal

As shown in Figures 4 and 5, there is no improvement at ash levels greater than eight percent when crushing to smaller topsizes. At ash levels less than eight percent there is a slight improvement in the yield or the energy recovery versus ash relationship when crushed to smaller topsizes with greater improvements resulting in crushing smaller than 28 mesh topsize. This indicates that some ash-forming minerals were liberated by crushing. The yield or energy recovery versus sulfur relationships in Figures 6 and 7 show there is

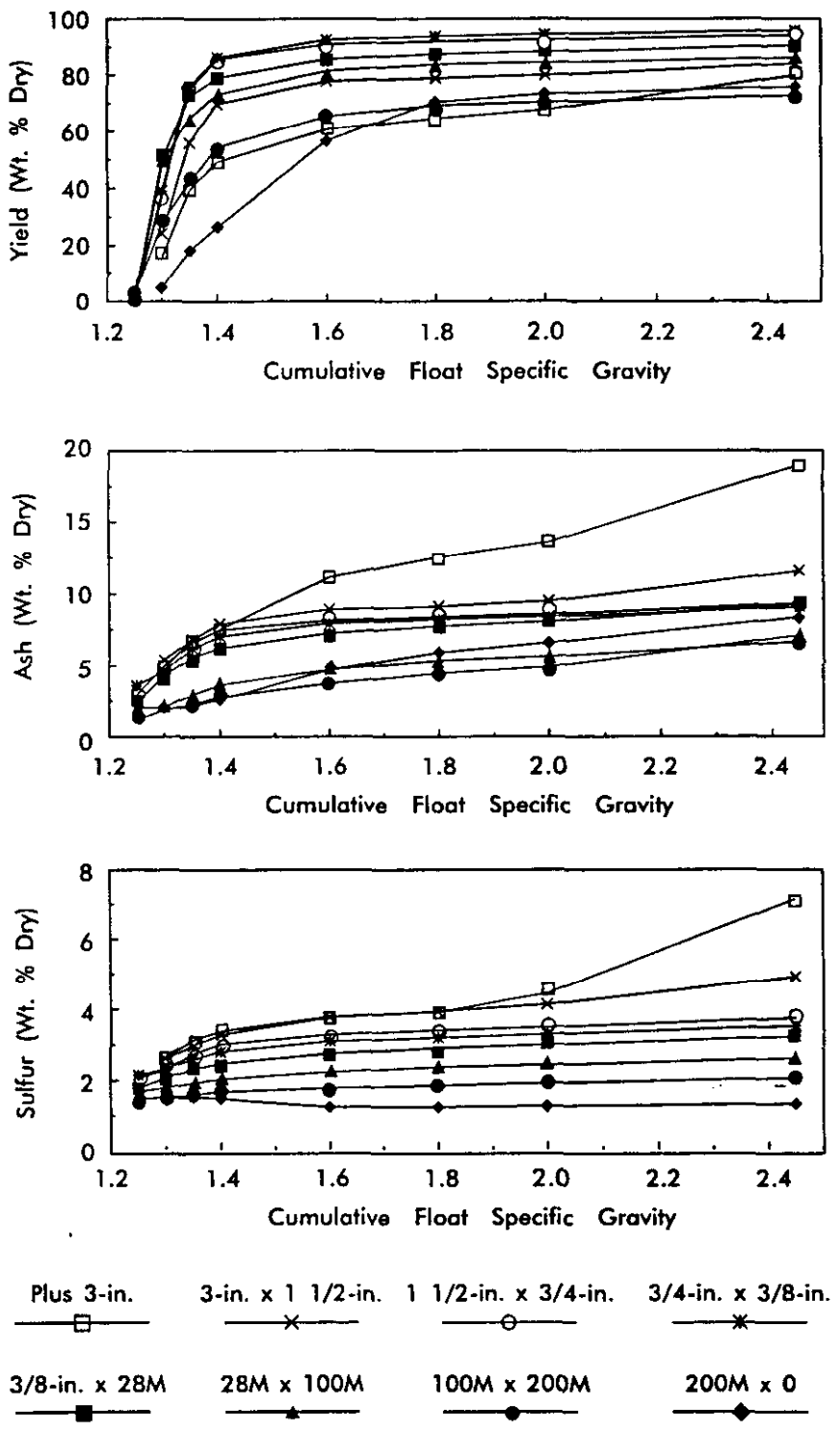


Figure 1. Theoretical Washability Curves. Illinois No. 2 Seam Coal.

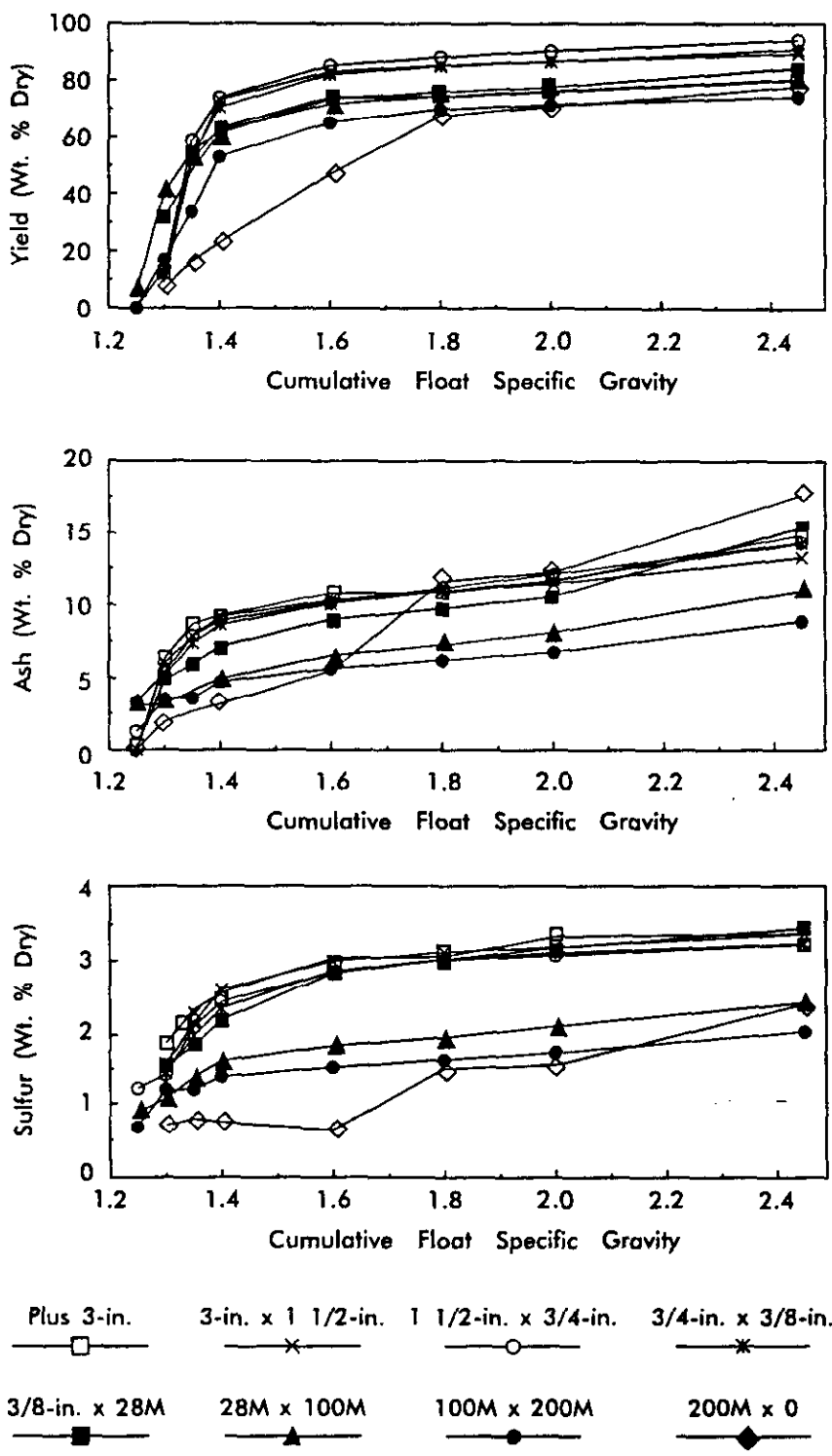


Figure 2. Theoretical Washability Curves. Illinois No. 3 Seam Coal.

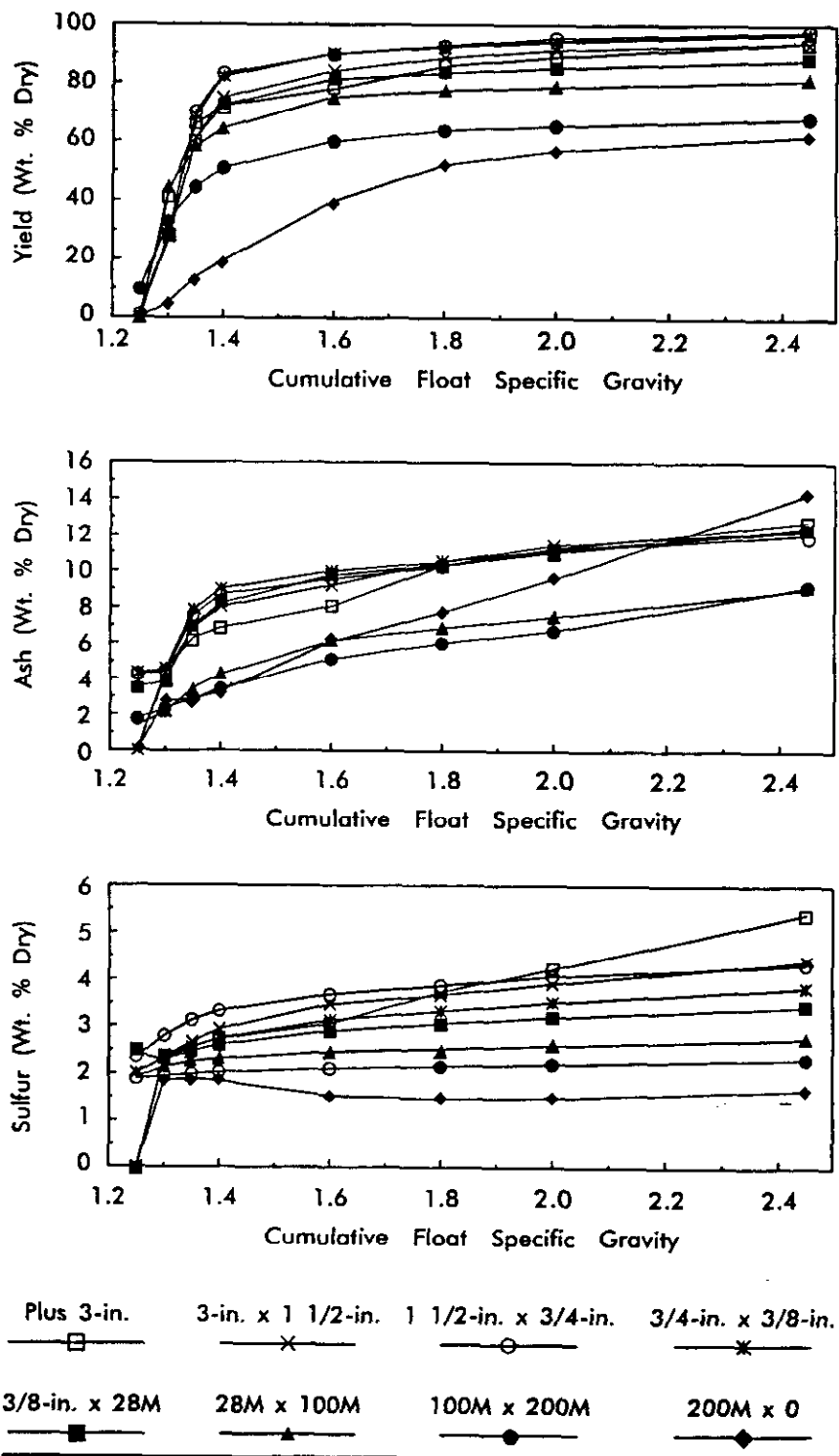


Figure 3. Theoretical Washability Curves. Illinois No. 5 Seam Coal.

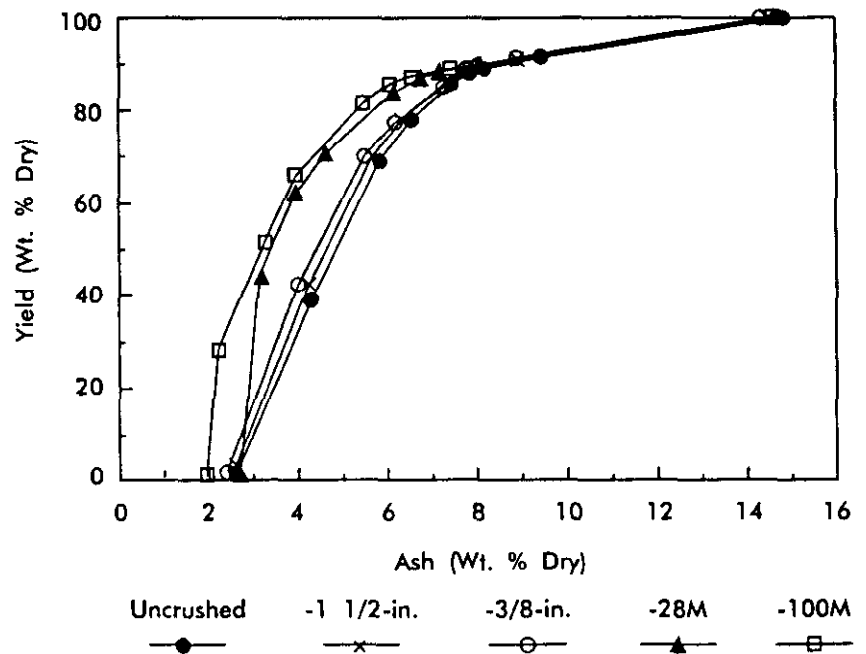


Figure 4. Ash Liberation Potential. Illinois No. 2 Seam Coal.

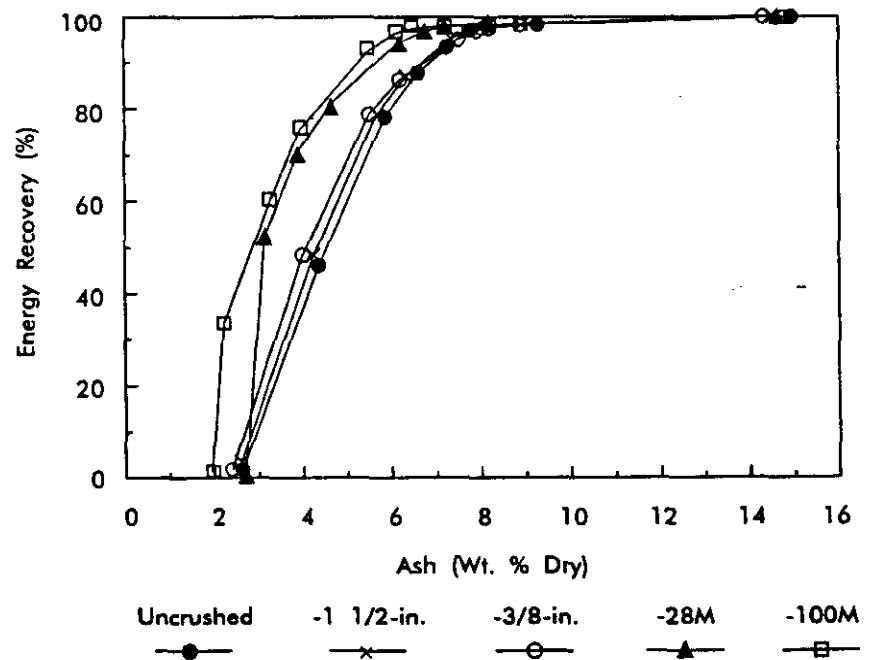


Figure 5. Ash Liberation Potential. Illinois No. 2 Seam Coal.

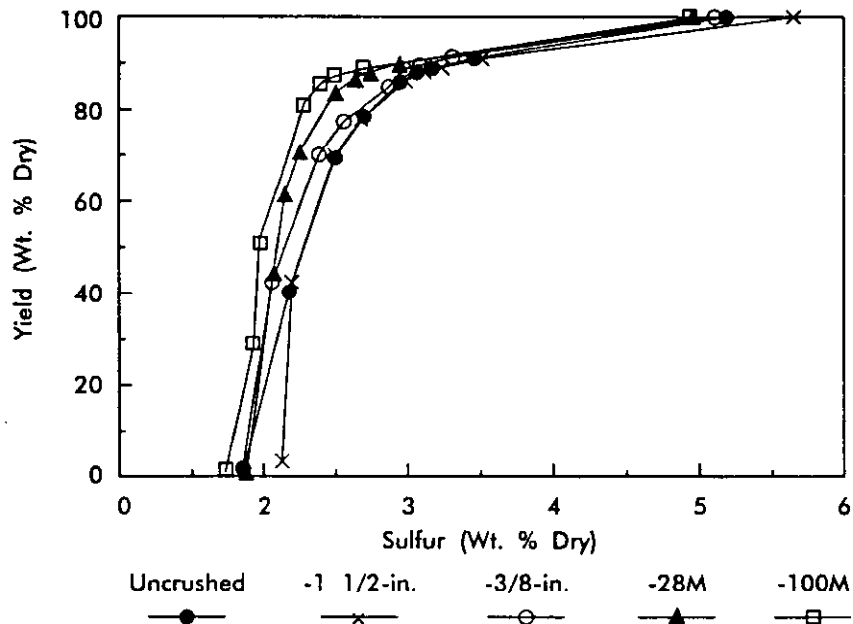


Figure 6. Total Sulfur Liberation Potential. Illinois No. 2 Seam Coal.

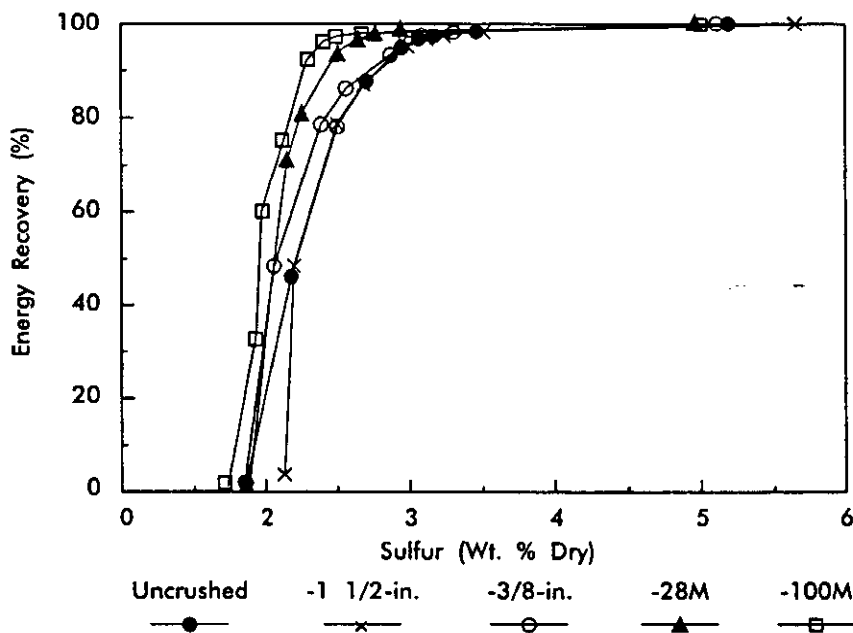


Figure 7. Total Sulfur Liberation Potential. Illinois No. 2 Seam Coal.

no improvement in sulfur content greater than 2.75 percent when crushing to smaller topsizes. For the Illinois No. 2 Seam coal the crushed 3/4-in. topsize was not reported because of obvious laboratory error in the data reported and there was not enough material to recheck the data.

Illinois No. 3 Seam Coal

As shown in Figures 8 and 9, there is no improvement at ash levels greater than ten percent when crushing to smaller topsizes. At ash levels less than ten percent there is a slight improvement in the yield or the energy recovery versus ash relationship when crushed to smaller topsizes with greater improvements resulting in crushing smaller than 28 mesh topsize. This indicates some ash-forming minerals were liberated by crushing. The yield or energy recovery versus sulfur relationships in Figures 10 and 11 show a slight improvement in all sulfur levels when crushing to smaller topsizes with greater improvement being made when crushing to 28 mesh and smaller.

Illinois No. 5 Seam Coal

As shown in Figures 12 and 13, there is no improvement at ash levels greater than nine percent when crushing to smaller topsizes. At ash levels less than nine percent there is a slight improvement in the yield or the energy recovery versus ash relationship when crushed to smaller topsizes with greater improvements resulting in crushing smaller than 28 mesh topsize. This indicates some ash-forming minerals were liberated by crushing. The yield or energy recovery versus sulfur relationships in Figures 14 and 15 show a slight improvement in all sulfur levels when crushing to smaller topsizes.

The sulfur level remains relatively high in all three seams, - indicating pyritic sulfur is liberated through crushing but the organic sulfur, as expected, is not. Any liberation caused by crushing leads to higher possible yields at any quality level. However, the benefits of this increased yield may not be found in practice since cleaning efficiency tends to fall with particle size. Also, finer clean coal is likely to have a higher moisture content that will negate some of the benefits of increased liberation. The handleability of the coal also becomes a concern when dealing with fine sizes.

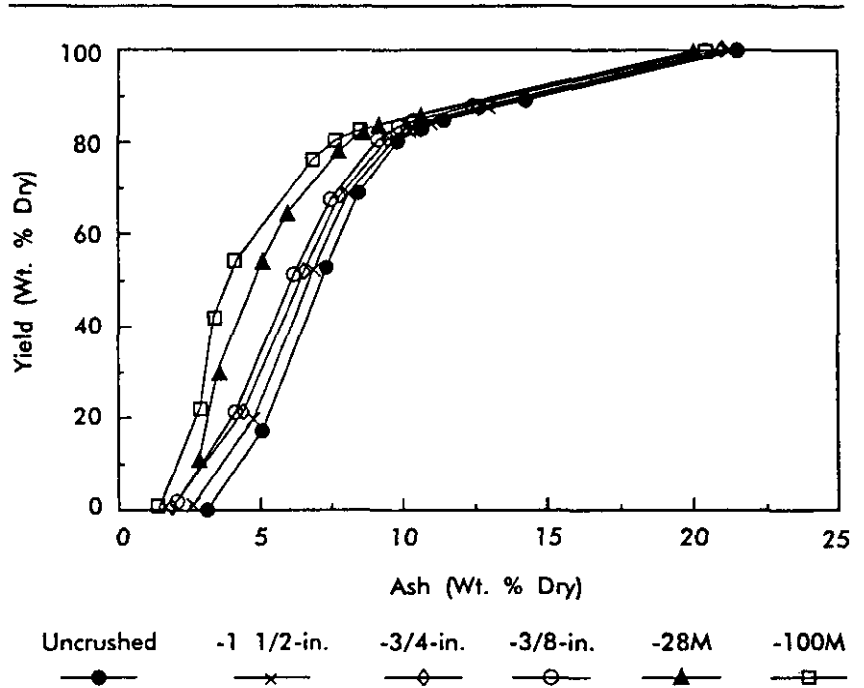


Figure 8. Ash Liberation Potential. Illinois No. 3 Seam Coal.

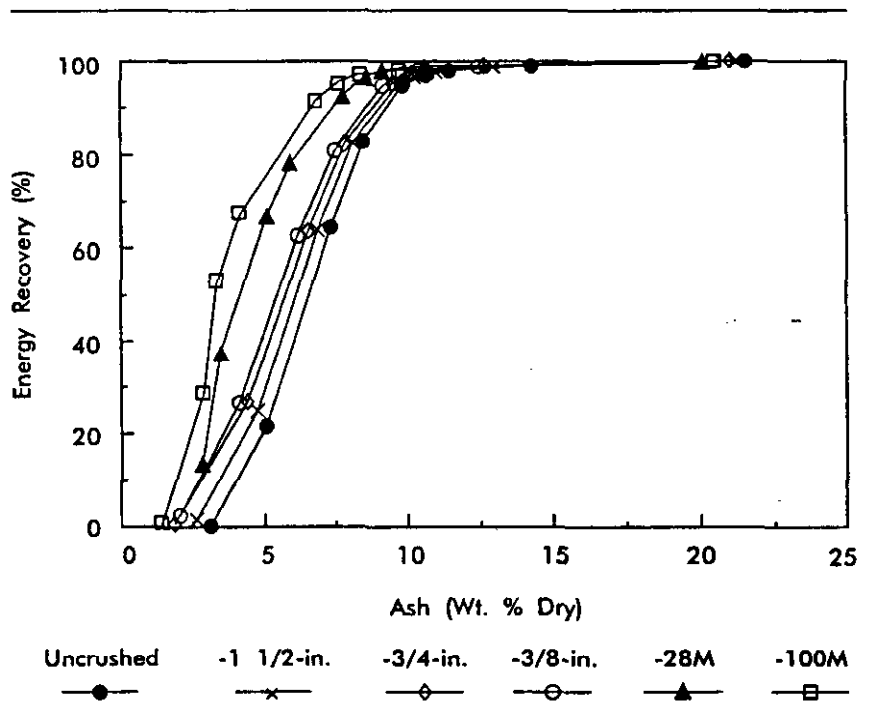


Figure 9. Ash Liberation Potential. Illinois No. 3 Seam Coal.

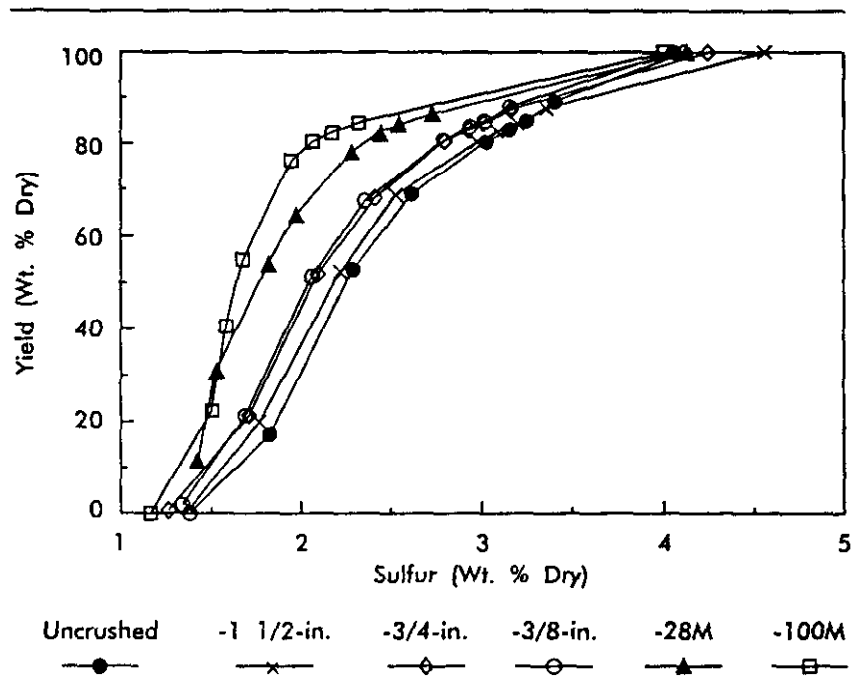


Figure 10. Total Sulfur Liberation Potential. Illinois No. 3 Seam Coal.

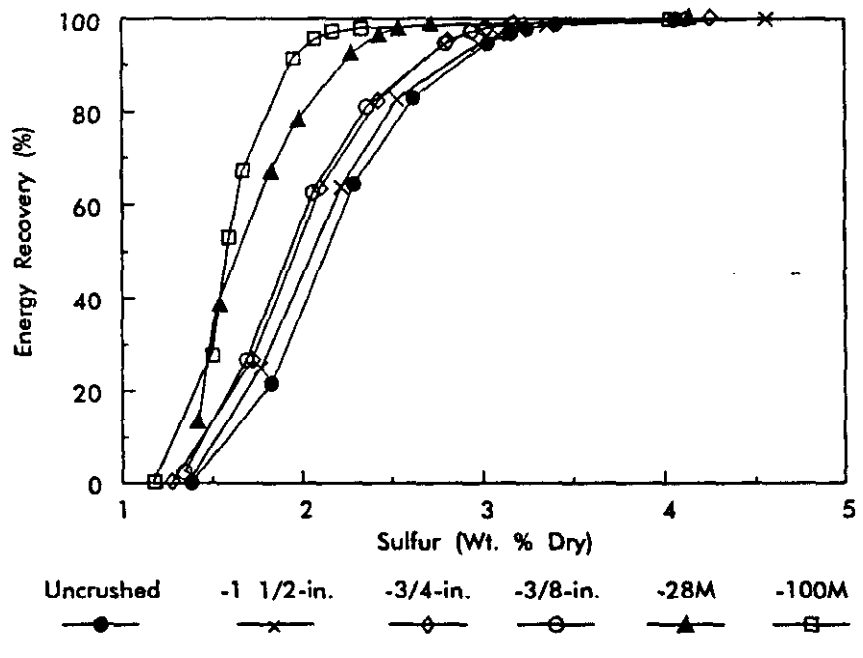


Figure 11. Total Sulfur Liberation Potential. Illinois No. 3 Seam Coal.

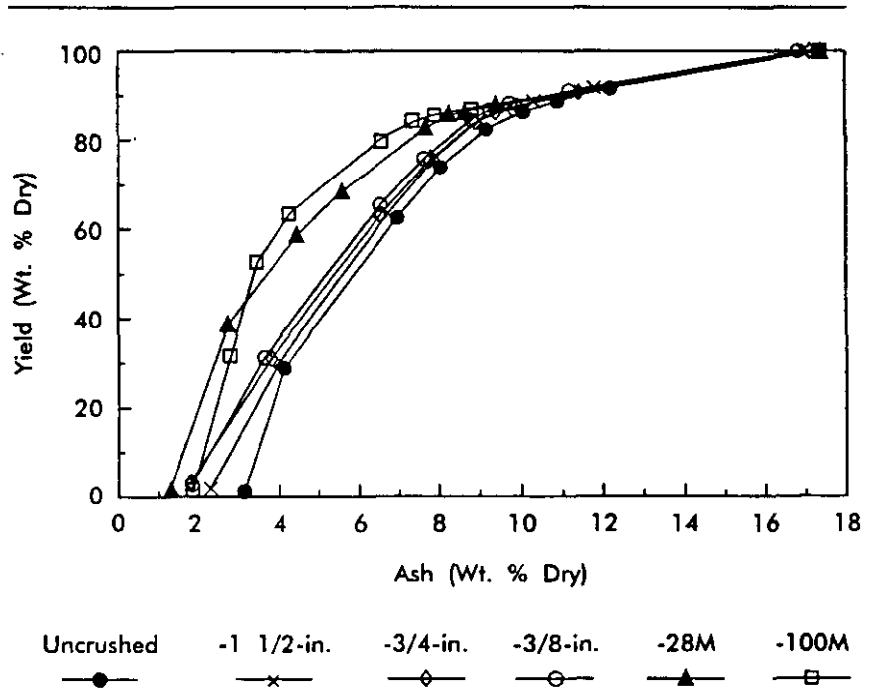


Figure 12. Ash Liberation Potential. Illinois No. 5 Seam Coal.

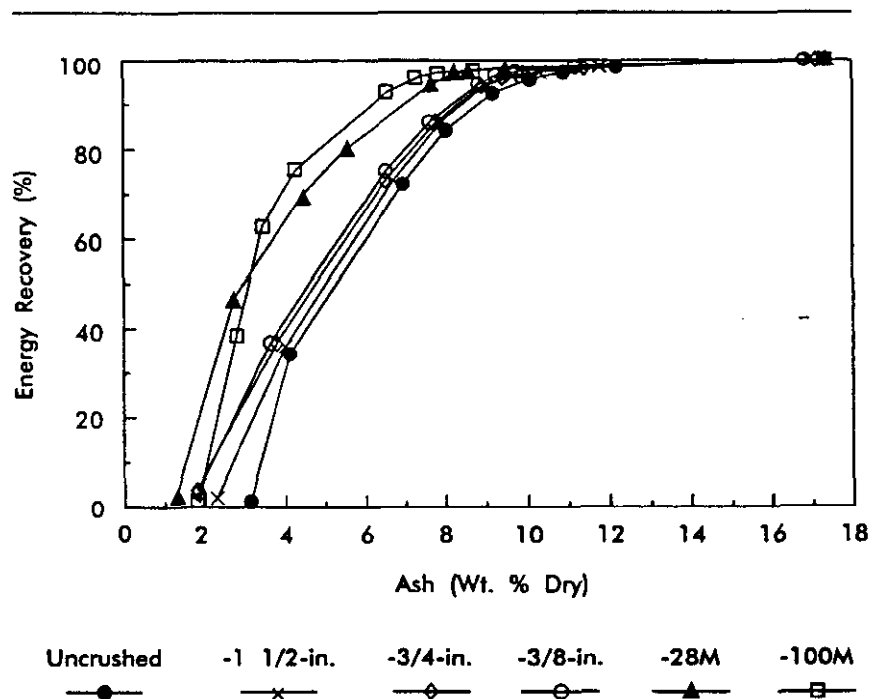


Figure 13. Ash Liberation Potential. Illinois No. 5 Seam Coal.

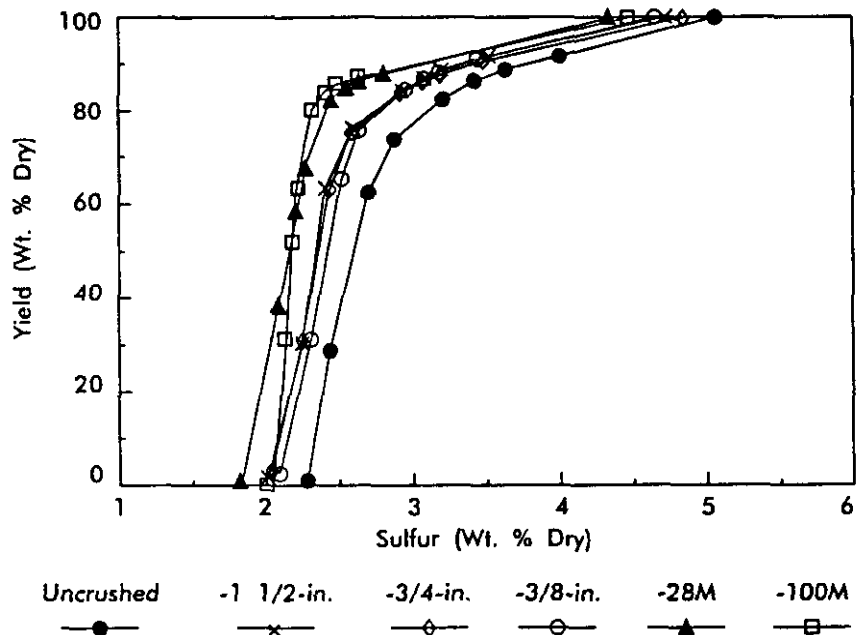


Figure 14. Total Sulfur Liberation Potential. Illinois No. 5 Seam Coal.

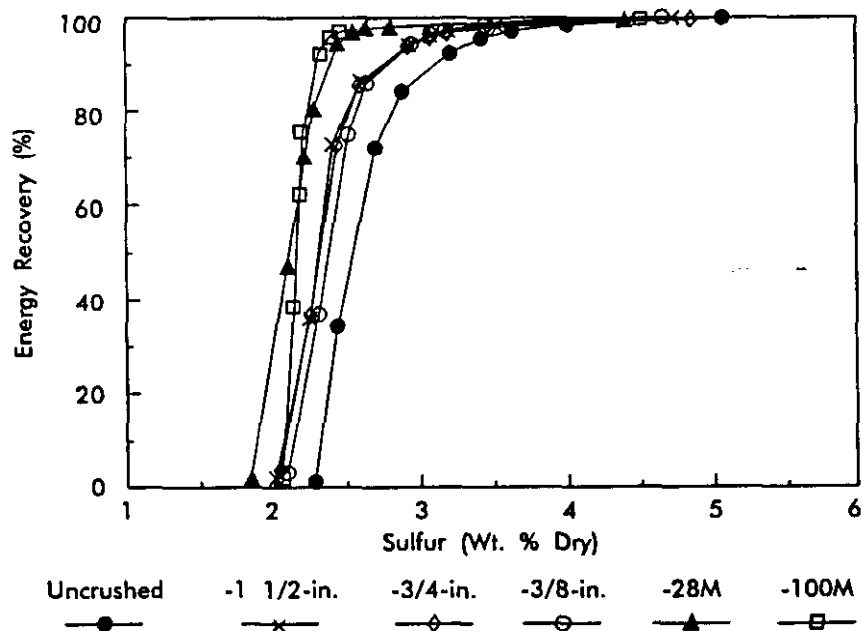


Figure 15. Total Sulfur Liberation Potential. Illinois No. 5 Seam Coal.

Laboratory Froth Flotation Testing

Laboratory froth flotation testing was individually performed on each coal seam in a WEMCO 3.5 liter laboratory flotation cell equipped with an automatic skimmer. In the test programs laboratory froth flotation work was performed on raw coal crushed to 100 mesh. Laboratory froth flotation work was limited to this size fraction because of parallel work also being done on this coal using advanced cleaning methods that crush coal to very fine sizes (minus 200 mesh). The investigation was conducted on each seam of raw coal at a five weight percent solids concentration. Other operating conditions of this testwork are given at the bottom of Tables 11 through 13. A total of 14 tests were performed on each coal at various frother (MIBC) and collector (No. 2 fuel oil) dosages. Froth concentrates (clean coal) were collected over a time interval of 240 seconds. Each concentrate was dried, weighed, and analyzed for ash, sulfur, and Btu content. The results of these analyses are shown in Tables 11 through 13.

Test results on the Illinois No. 2, 3, and 5 Seam coals show that with the addition of a collector, such as No. 2 fuel oil and with dosages of frother greater than 0.25 lbs per ton, yield increases at an increased ash and sulfur content. The first three tests for each coal seam show that collector is required to float these coals, unless high dosages of frother (+0.75 lbs. per ton of feed) are used. This is indicated by poor yield and ash reduction when no collector and low frother dosages were used. Tables 11 through 13 generally show that as dosages of frother (MIBC) and collector increased, yield increased, but at the expense of higher ash and sulfur content. Optimum dosage of frother and collector for Illinois No. 2 seam coal is around 0.50 to 0.75 lbs. of frother and 0.50 to 1.00 lbs. of collector per ton of feed. Reagent dosages at these levels produced clean coal at 90-94 percent Btu recovery, 9.0-9.5 percent ash content, and 3.8-4.3 percent sulfur at a cost of \$0.35-0.55 per ton of feed. For the Illinois No. 3 and 5 coals the optimum dosage of frother and collector is around 0.50 to 0.75 lbs. frother and 0.50 to 2.00 lbs. of collector per ton of feed. Reagent dosages at these levels produced clean coal from the Illinois No. 3 Seam coal at 92-95 percent Btu recovery, 11.5-12.0 percent ash content, and 3.2-3.5 percent sulfur at a cost of \$0.35-0.65 per ton of feed. Reagent dosages at these levels produced clean coal from the Illinois No. 5 Seam coal at 83-88 percent Btu recovery, 10.0-10.6 percent

Table 11. Laboratory Froth Flotation Results. For fines from crushed to 100M raw coal, 100M x 0 size fraction. Illinois No. 2 Seam Coal (Dry Basis).

Test No.	Reagent Dosage (lb/t)		Stream	Quality		Performance				
	MIBC Frother	No. 2 Fuel Oil Collector		Ash (Wt %)	Total Sulfur (Wt %)	Yield (Wt %)	Combustibles Recovery (%)	Ash Removal (Wt %)	Sulfur Removal (Wt %)	Ash* Separation Efficiency
			Feed (all tests)	14.5	5.10	100.0	100.0	0.0	0.0	0.0
1	0.25	0.00	Clean Coal	11.5	4.26	24.1	24.9	81.0	79.9	6.0
			Refuse	15.5	5.4	75.9				
2	0.25	0.00	Clean Coal	7.9	3.58	42.4	45.7	77.1	70.3	22.7
			Refuse	19.4	6.2	57.6				
3	0.75	0.00	Clean Coal	7.8	3.55	64.5	69.6	65.3	55.1	34.9
			Refuse	26.8	7.9	35.5				
4	0.25	0.50	Clean Coal	5.7	2.93	17.7	19.5	93.0	89.8	12.5
			Refuse	16.4	5.6	82.3				
5	0.50	0.50	Clean Coal	8.4	3.83	75.7	81.2	56.4	43.1	37.6
			Refuse	33.8	9.1	24.3				
6	0.75	0.50	Clean Coal	9.1	3.89	84.4	89.8	47.4	35.7	37.2
			Refuse	44.1	11.6	15.6				
7	0.25	1.00	Clean Coal	7.3	3.45	51.5	55.9	74.1	65.2	30.0
			Refuse	22.2	6.9	48.5				
8	0.50	1.00	Clean Coal	9.2	4.26	88.3	93.8	44.3	26.3	38.1
			Refuse	54.9	11.4	11.7				
9	0.75	1.00	Clean Coal	9.5	4.08	87.2	92.3	42.9	30.2	35.2
			Refuse	48.8	12.1	12.8				
10	0.25	2.00	Clean Coal	7.4	3.51	69.5	75.3	64.6	52.2	39.9
			Refuse	30.8	8.7	30.5				
11	0.50	2.00	Clean Coal	8.7	3.87	83.4	89.0	49.9	36.8	38.9
			Refuse	43.6	11.3	16.7				
12	0.75	2.00	Clean Coal	9.9	4.48	90.0	94.8	38.7	21.0	33.5
			Refuse	56.0	10.6	10.0				
13	0.50	1.00	Clean Coal	9.4	4.15	87.7	93.0	43.0	28.6	36.0
			Refuse	51.0	11.9	12.3				
14	0.50	1.00	Clean Coal	9.1	4.14	87.9	93.5	45.3	28.6	38.8
			Refuse	54.4	12.1	12.1				

* Ash Efficiency = Combustibles Recovery - (100 - Ash Removal)

Notes:

-- The tests used an WEMCO 3.5-liter laboratory flotation cell with an automatic skimmer.

-- Standard Test Conditions:

Solids (Wt %)	5	Wetting Time (min)	10	Rotor Speed (r/m)	1,200	Conditioning Time (m:s)	2:00
Slurry pH	6-8	Aeration Rate (scfm)	35	Skimmer Speed (r/m)	20	Collection Time (m:s)	4:00

Table 12. Laboratory Froth Flotation Results. For fines from crushed to 100M raw coal, 100M x 0 size fraction. Illinois No. 3 Seam Coal (Dry Basis).

Test No.	Reagent Dosage (lb/t)		Stream	Quality		Performance				
	MIBC No.	No. 2 Fuel Oil Collector		Ash (Wt %)	Total Sulfur (Wt %)	Yield (Wt %)	Combustibles Recovery (%)	Ash Removal (Wt %)	Sulfur Removal (Wt %)	Ash* Separation Efficiency
			Feed (all tests)	19.0	4.10	100.0	100.0	0.0	0.0	0.0
1	0.25	0.00	Clean Coal	10.4	2.89	39.9	44.1	78.2	71.9	22.3
			Refuse	24.7	4.9	60.2				
2	0.50	0.00	Clean Coal	12.6	3.19	65.2	70.3	56.7	49.3	27.1
			Refuse	30.9	5.8	34.8				
3	0.75	0.00	Clean Coal	11.2	3.17	81.9	89.7	51.7	36.7	41.4
			Refuse	54.1	8.3	18.1				
4	0.25	0.50	Clean Coal	11.5	3.14	54.4	59.4	66.9	58.4	26.3
			Refuse	27.8	5.2	45.6				
5	0.50	0.50	Clean Coal	10.6	3.09	80.3	88.6	55.3	39.5	43.9
			Refuse	53.2	8.2	19.7				
6	0.75	0.50	Clean Coal	11.6	3.27	85.8	93.6	47.7	31.6	41.3
			Refuse	63.7	9.1	14.2				
7	0.25	1.00	Clean Coal	9.9	2.98	70.7	78.6	63.1	48.6	41.7
			Refuse	40.9	6.8	29.3				
8	0.50	1.00	Clean Coal	10.0	3.04	76.4	84.8	59.8	43.4	44.6
			Refuse	48.0	7.5	23.6				
9	0.75	1.00	Clean Coal	11.6	3.25	85.1	92.8	48.1	32.6	40.9
			Refuse	61.0	8.9	15.0				
10	0.25	2.00	Clean Coal	10.5	3.11	73.1	80.8	59.6	44.5	40.4
			Refuse	42.1	6.8	26.9				
11	0.50	2.00	Clean Coal	12.0	3.46	87.7	95.3	44.6	26.0	39.9
			Refuse	69.0	8.7	12.3				
12	0.75	2.00	Clean Coal	13.4	3.55	88.7	94.8	37.5	23.2	32.4
			Refuse	62.9	8.4	11.3				
13	0.50	1.00	Clean Coal	9.8	2.95	76.6	85.3	60.5	44.9	45.8
			Refuse	49.1	7.9	23.4				
14	0.50	1.00	Clean Coal	10.0	2.98	76.3	84.8	59.9	44.5	44.7
			Refuse	48.0	7.7	23.7				

* Ash Efficiency = Combustibles Recovery - (100 - Ash Removal)

Notes:

-- The tests used an WEMCO 3.5-liter laboratory flotation cell with an automatic skimmer.

-- Standard Test Conditions:

Solids (Wt %)	5	Wetting Time (min)	10	Rotor Speed (r/m)	1,200	Conditioning Time (m:s)	2:00
Slurry pH	6-8	Aeration Rate (scfm)	35	Skimmer Speed (r/m)	20	Collection Time (m:s)	4:00

Table 13. Laboratory Froth Flotation Results. For fines from crushed to 100M raw coal, 100M x 0 size fraction. Illinois No. 5 Seam Coal (Dry Basis).

Reagent Dosage (lb/t)			Quality		Performance					
Test No.	MIBC Frother	No. 2 Fuel Oil Collector	Stream	Ash	Total Sulfur	Yield (Wt %)	Combustibles	Ash	Sulfur	Ash*
				(Wt %)	(Wt %)		Recovery (%)	Removal (Wt %)	Removal (Wt %)	Separation Efficiency
			Feed (all tests)	17.2	4.83	100.0	100.0	0.0	0.0	0.0
1	0.25	0.00	Clean Coal	6.4	2.71	25.5	28.8	90.5	85.7	19.4
			Refuse	20.9	5.6	74.5				
2	0.50	0.00	Clean Coal	7.7	2.96	47.9	53.4	78.5	70.6	31.9
			Refuse	25.9	6.6	52.1				
3	0.75	0.00	Clean Coal	9.4	3.18	66.5	72.7	63.6	56.2	36.3
			Refuse	32.6	8.1	33.5				
4	0.25	0.50	Clean Coal	7.4	2.91	37.3	41.7	83.9	77.5	25.6
			Refuse	23.0	6.0	62.7				
5	0.50	0.50	Clean Coal	9.3	3.23	68.5	75.1	63.1	54.2	38.2
			Refuse	34.5	8.3	31.5				
6	0.75	0.50	Clean Coal	10.6	3.42	81.3	87.7	49.8	42.5	37.5
			Refuse	45.7	10.9	18.8				
7	0.25	1.00	Clean Coal	8.9	3.25	66.6	73.3	65.7	55.2	39.0
			Refuse	33.9	8.0	33.4				
8	0.50	1.00	Clean Coal	9.9	3.27	76.3	83.0	56.2	48.4	39.2
			Refuse	40.8	9.8	23.7				
9	0.75	1.00	Clean Coal	10.0	3.30	77.5	84.3	55.1	47.0	39.5
			Refuse	42.2	10.1	22.5				
10	0.25	2.00	Clean Coal	8.6	3.17	59.9	66.1	70.0	60.7	36.1
			Refuse	30.0	7.3	40.1				
11	0.50	2.00	Clean Coal	10.6	3.49	77.5	83.7	52.4	44.0	36.0
			Refuse	40.0	9.4	22.5				
12	0.75	2.00	Clean Coal	11.7	3.54	82.9	88.5	43.8	39.2	32.2
			Refuse	44.1	11.1	17.1				
13	0.50	1.00	Clean Coal	9.6	3.25	75.1	82.0	58.2	49.5	40.1
			Refuse	40.1	9.6	25.0				
14	0.50	1.00	Clean Coal	9.7	3.30	74.7	81.5	57.7	48.9	39.2
			Refuse	39.3	9.4	25.3				

* Ash Efficiency = Combustibles Recovery - (100 - Ash Removal)

Notes:

-- The tests used an WEMCO 3.5-liter laboratory flotation cell with an automatic skimmer.

-- Standard Test Conditions:

Solids (Wt %)	5	Wetting Time (min)	10	Rotor Speed (r/m)	1,200	Conditioning Time (m:s)	2:00
Slurry pH	6-8	Aeration Rate (scfm)	35	Skimmer Speed (r/m)	20	Collection Time (m:s)	4:00

ash content, and 3.2-3.5 percent sulfur at a cost of \$0.35-0.65 per ton of feed.

In order to establish the relationships between retention time and both yield and product quality, froth concentrations were collected at timed intervals of 0 to 15 seconds, 15 to 30 seconds, 30 to 45 seconds, 45 to 60 seconds, 60 to 120 seconds, and 120 to 240 seconds for tests that showed a high yield. The flotation time-recovery curves for the 100 mesh x 0 mesh raw coal tests with high yield are shown in Figures 16 through 18. For the purpose of these figures, recovery is defined as the portion of the total material present in the feed that was recovered in the concentrate. For example, the 100 mesh x 0 mesh feed coal contains 5.23 percent sulfur. During flotation rate tests, it was found that over the interval of 0 to 60 seconds, 83.18 percent by weight of the coal reported to the product (float) and this product coal had a sulfur content of 4.14 percent. At 60 seconds, sulfur recovery for this test was 65.84 percent $([0.8318 \times 4.14]/5.23)$.

Figures 16 through 18 indicate that the combustibles, the ash, and the sulfur recoveries follow the solids recoveries (yield). Figures 16 and 17 indicate that for the Illinois No. 2 and 3 coals very little additional recovery can be expected above a 60 second time period. While in Illinois No. 5 results (Figure 18) show that additional recoveries can be expected at retention times greater than 240 seconds.

Coal-Cleaning Evaluation

Two commercial-scale tests were conducted at the CQDC with an equal blend of the Illinois No. 2, 3, and 5 Seam coals. The flowsheet as shown in Figure 19 consisted of a heavy-media cyclone (HMC) and water-only cyclone/spiral concentrator (WOC/Spiral) cleaning circuits. In the first flowsheet test, the heavy-media cyclone operated at a circulating specific gravity of 1.40 and in the second flowsheet test the heavy-media cyclone circulating gravity was increased to 1.60 to show the decrease in quality as compared to the increase in yield. Flowsheet tests were conducted to determine the cleanability of this coal and to provide clean coal samples for a laboratory combustion characteristics analysis. The clean coal laboratory combustion characteristics then were compared to the raw coal characteristics to determine the effect of coal quality on certain important combustion characteristics such as

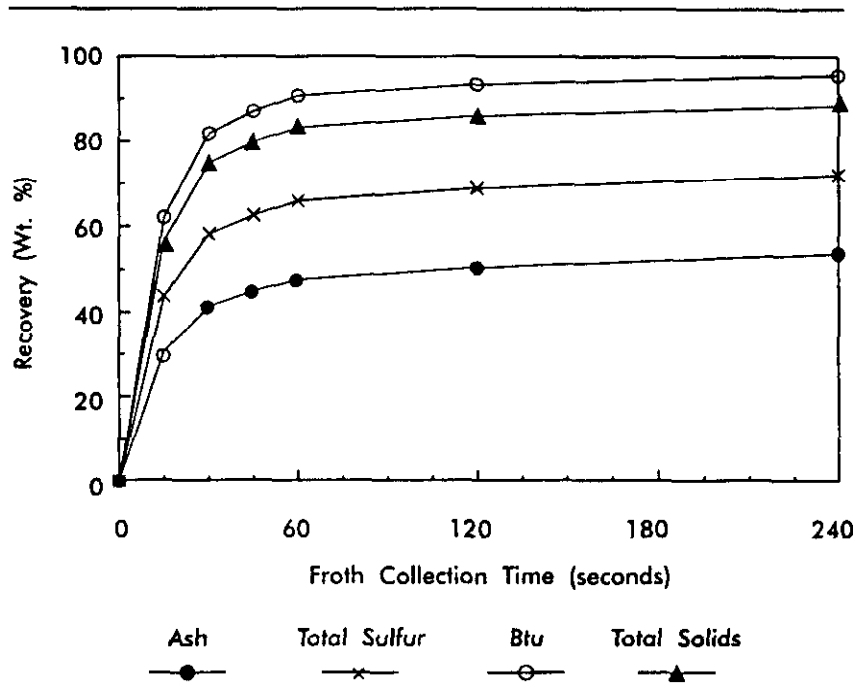


Figure 16. Flotation Rates. Illinois No. 2 Seam Coal.

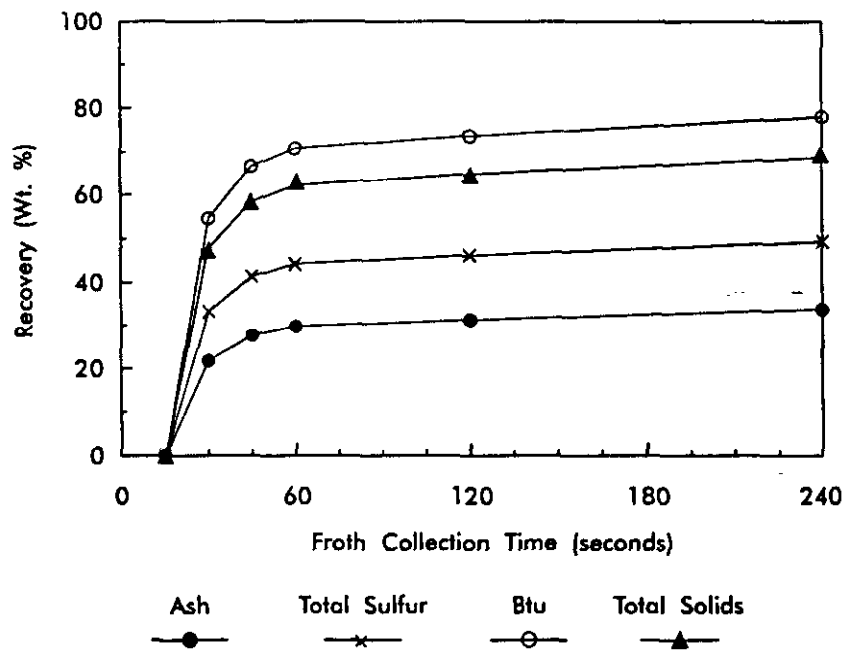


Figure 17. Flotation Rates. Illinois No. 3 Seam Coal.

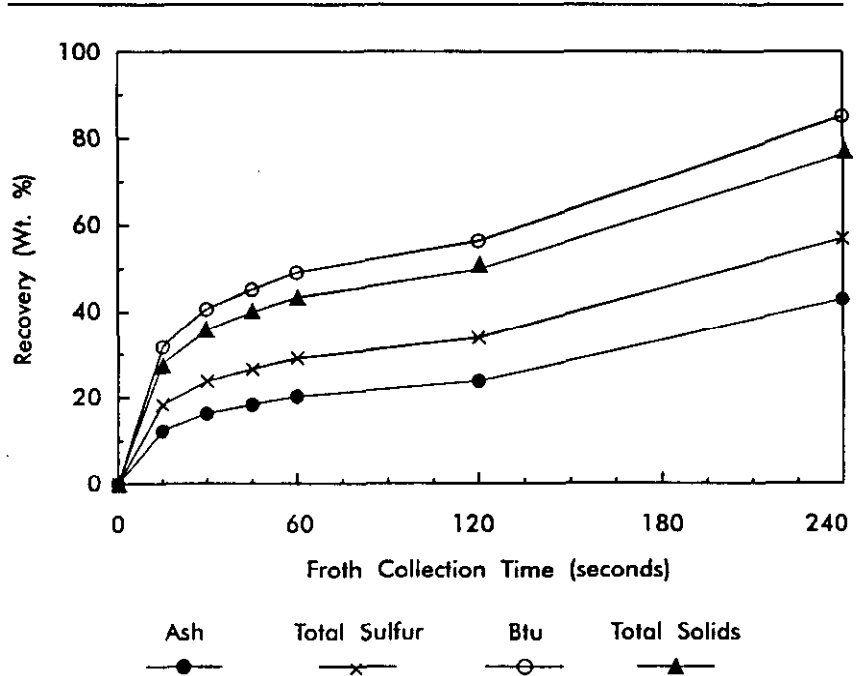


Figure 18. Flotation Rates. Illinois No. 5 Seam Coal.

Table 15. Water-only Cyclone/Spiral Concentrator Unit Performance. Illinois No. 2, 3, and 5 Seam Coal Blend, Gallatin County, Illinois (Dry Basis).

CONDITIONS	Test 1			Test 2		
	Water-only Cyclone			Water-only Cyclone		
Coal Size Fed	28M x 0			28M x 0		
Coal Size Cleaned	28M x 100M			28M x 100M		
New Feed Rate (dry t/h)	2.66			2.72		
Feed Pressure (psig)	N/D			14.5		
CYCLONE GEOMETRY						
Body Diameter (in.)	10			10		
Orifice Diameters:						
Feed (in.)	4			4		
Overflow (in.)	4			4		
Apex (in.)	2			2		
Vortex Finder (in.)	13-1/4			13-1/4		
Cone Angle (°)	75			75		
SPIRAL CONFIGURATION						
Number of Turns	5			5		
Number of Starts	1			1		
PERFORMANCE						
Yield (Wt %)	91			92		
Energy Recovery (%)	98			98		
Ash Removal (Wt %)	28			27		
Sulfur Removal (Wt %)	35			31		
QUALITY (Dry Basis)		Clean			Clean	
	Feed	Coal	Refuse	Feed	Coal	Refuse
Ash (Wt %)	24.22	19.16	74.83	22.52	17.94	74.75
Total sulfur (Wt %)	4.13	2.99	16.15	4.29	3.10	16.62
Heating Value (Btu/lb)	11091	11988	2033	11341	12113	2048
SO ₂ Emission Potential (lb/MBtu)	7.44	4.98	158.74	7.56	5.11	162.14

Note: * In Test 1 the Ash, Sulfur and Btu values were mathematically determined.
The primary cyclone was made by Krebs Engineers.
The Spiral Concentrator was made by Mineral Deposits LTD.

Table 16. Flowsheet Performance Comparison. *Illinois No. 2, 3, and 5 Seam Coal Blend, Gallatin County, Illinois (Dry Basis, Except Moisture)*

	HMC, WOC/Spiral Flowsheet (Test 1)	HMC, WOC/Spiral Flowsheet (Test 2)
RAW COAL		
Feed Rate (wet t/h)	18	18
Coal Size	3/4-in. x 0	3/4-in. x 0
Total Moisture (Wt %)	6.50	5.57
Ash (Wt %)	18.25	18.22
Sulfur (Wt %)	4.88	5.06
Pyritic Sulfur (Wt %)	3.48	3.44
Organic Sulfur (Wt %)	1.25	1.47
Sulfate Sulfur (Wt %)	0.15	0.16
Heating Value (Btu/lb)	12,112	12,047
SO ₂ Emission Potential (lb/MBtu)	8.05	8.39
CLEAN COAL		
Total Moisture (Wt %)	6.29	5.89
Ash (Wt %)	8.23	8.96
Total Sulfur (Wt %)	2.63	3.17
Pyritic Sulfur (Wt %)	0.97	1.18
Organic Sulfur (Wt %)	1.64	1.96
Sulfate Sulfur (Wt %)	0.02	0.03
Heating Value (Btu/lb)	13855	13696
SO ₂ Emission Potential (lb/MBtu)	3.79	4.62
PERFORMANCE		
Yield (Wt %)	71	80
Energy Recovery (%)	81	91
Ash Removal (Wt %)	68	60
Sulfur Removal (Wt %)	62	50
Ash Reduction (%)	75	51
SO ₂ Reduction (%)	53	45

Note: HMC - Heavy Media Cyclone
WOC - Water-Only-Cyclone/Spiral Concentrator

Comparing the CQDC flowsheet test to the commercial plant is not a true comparison because of the limited knowledge we have of the blend of the three coals from the commercial plant. It has been reported that the coal shipped from the commercial plant contains a greater amount of the Illinois No. 2 Seam coal. This being the case and comparing the washability data shown in Figures 1 through 3, Illinois No. 2 has a higher yield at a given gravity, which gives a higher overall yield.

Combustion Characteristics Comparison

Combustion characterization consists of laboratory analyses that can be used to compare the changes in combustion characteristics brought about by cleaning. These analyses include:

- Proximate Analysis
- Ultimate Analysis
- Heating Value
- Hardgrove Grindability Index
- Ash Constituents
- Ash Fusibility (Oxidizing and Reducing Atmospheres)
- Chlorine Analysis

Laboratory combustion characterizations were performed for a blend of raw coal, the clean coal from both flowsheet tests conducted at the CQDC, and the commercially-cleaned coal sampled at the Watson Generation Station.

The results of the combustion characteristics comparison based on laboratory analyses of a blend of the Illinois No. 2, 3, and 4 Seam raw coals blended in equal proportions, the two clean coals from the flowsheet tests, and the commercially-cleaned coal sampled at the Watson Generation Station are presented in Table 17. Also included in the table are calculated indices comparing coal ash characteristics resulting from combustion.

Proximate Analysis. A proximate analysis is used to help characterize how a coal reacts when it is heated; that is, how much of the coal is released as a gas and vapors (volatile matter) and the quantity that remains as fixed carbon and ash. Also, a proximate analysis usually quantifies the amount of ash and sulfur in the ash. As shown in Table 17, cleaning significantly decreased ash content in all three cleaning processes. Ash decreased from a raw coal value of

Table 17. Combustion Parameters Comparison. Illinois Blended Coals, Gallatin County, Illinois.

	<u>Raw Coal From Test No. 1</u>	<u>Test 1 Clean Coal</u>	<u>Test 2 Clean Coal</u>	<u>Field Test Clean Coal</u>
Yield (Wt %)	100.0	71.0	80.0	n/a
Energy Recovery (%)	100.0	81.2	91.0	n/a
Total Moisture (Wt %)	6.5	6.3	5.9	6.5
PROXIMATE ANALYSIS	<u>Dry (As-received)</u>	<u>Dry (As-received)</u>	<u>Dry (As-received)</u>	<u>Dry (As-received)</u>
Ash (Wt %)	18.25 (17.06)	8.23 (7.71)	8.96 (8.43)	8.8 (8.3)
Volatile Matter (Wt %)	33.48 (31.30)	37.49 (35.13)	36.56 (34.41)	36.3 (34.0)
Fixed Carbon (Wt %)	48.27 (45.14)	54.28 (50.87)	54.48 (51.27)	54.8 (51.3)
Total Sulfur (Wt %)	4.88 (4.56)	2.63 (2.46)	3.17 (2.98)	2.71 (2.53)
Pyritic Sulfur (Wt %)	3.48 (3.25)	0.97 (0.91)	1.18 (1.11)	0.71 (0.66)
Pyritic/Total (%)	71	37	37	26
Sulfate Sulfur (Wt %)	0.15 (0.14)	0.02 (0.02)	0.03 (0.03)	n/a n/a
Organic Sulfur (Wt %)	1.25 (1.17)	1.64 (1.53)	1.96 (1.84)	n/a n/a
Heating Value (Btu/lb)	12,112 (11,325)	13,855 (12,982)	13,696 (12,888)	13,426 (12,555)
Chlorine (Wt %)	0.29 (0.27)	0.27 (0.25)	0.26 (0.25)	0.31 (0.29)
SO ₂ (lb/MBtu)	8.23	3.79	4.63	4.27
Hardgrove Grindability Index (HGI)	57	60	60	62
ULTIMATE ANALYSIS				
Carbon (Wt %)	66.17 (61.87)	75.01 (70.29)	74.92 (70.51)	74.5 (69.6)
Hydrogen (Wt %)	4.43 (4.14)	5.08 (4.76)	5.22 (4.91)	5.0 (4.7)
Nitrogen (Wt %)	1.28 (1.19)	1.45 (1.36)	1.40 (1.32)	1.5 (1.4)
Oxygen (Wt %)	4.99 (4.68)	7.60 (7.13)	6.33 (5.96)	7.2 (6.7)
ASH FUSIBILITY (°F) (Reducing/Oxidizing)				
Initial Deformation	1970/2370	2000/2480	1960/2490	1988/2405
Softening	2010/2440	2070/2525	2000/2530	2055/2466
Hemi-Spherical	2135/2510	2200/2560	2085/2550	2156/2503
Fluid	2205/2545	2305/2600	2230/2570	2298/2534

* Not the same raw coal used to calculate cleaning performance.

Table 17. Combustion Parameters Comparison (continued). Illinois Blended Coals, Gallatin County, Illinois.

	Raw Coal			Test 1 Clean Coal			Test 2 Clean Coal			Field Test Clean Coal		
	Proportion of:			Proportion of:			Proportion of:			Proportion of:		
	Dry Ash (%)	Dry Coal (%)	(lb/MBtu)	Dry Ash (%)	Dry Coal (%)	(lb/MBtu)	Dry Ash (%)	Dry Coal (%)	(lb/MBtu)	Dry Ash (%)	Dry Coal (%)	(lb/MBtu)
ASH COMPOSITION												
Mineral:												
SiO ₂	39.50	7.21	5.95	48.61	4.00	2.89	45.65	4.09	2.99	48.39	4.27	3.18
Al ₂ O ₃	17.16	3.13	2.59	20.64	1.70	1.23	18.50	1.66	1.21	19.09	1.69	1.26
Fe ₂ O ₃	28.49	5.20	4.29	20.60	1.70	1.22	26.52	2.38	1.73	21.00	1.85	1.38
CaO	4.18	0.76	0.63	2.76	0.23	0.16	3.02	0.27	0.20	3.06	0.27	0.20
MgO	1.81	0.33	0.27	1.03	0.08	0.06	1.28	0.11	0.08	1.08	0.10	0.07
Na ₂ O	0.27	0.05	0.04	0.30	0.02	0.02	0.20	0.02	0.01	0.36	0.03	0.02
K ₂ O	1.93	0.35	0.29	2.05	0.17	0.12	1.91	0.17	0.12	2.06	0.18	0.14
TiO ₂	0.86	0.16	0.13	1.15	0.09	0.07	0.96	0.09	0.06	0.78	0.07	0.05
MnO ₂	0.09	0.02	0.01	0.04	0.00	0.00	0.06	0.01	0.00	0.05	0.00	0.00
P ₂ O ₅	0.37	0.07	0.06	0.29	0.02	0.02	0.20	0.02	0.01	0.19	0.02	0.01
SO ₃	3.98	0.73	0.60	1.65	0.14	0.10	1.72	0.15	0.11	2.44	0.22	0.16
Unknown	1.36	0.25	0.20	0.88	0.07	0.05	0.00	0.00	0.00	1.50	0.13	0.10
	100.00	18.25	15.07	100.00	8.23	5.94	100.02	8.96	6.54	100.00	8.83	6.58
CALCULATED INDICES												
Silica Ratio		0.53			0.67			0.60			0.66	
Base-to-Acid Ratio		0.64			0.38			0.51			0.40	
Ash (lb/MBtu)		15.1			5.9			6.5			6.6	
Slagging Index (Rs)		3.11			1.00			1.60			1.09	
Classification		Severe			Medium			Medium			Medium	
Fouling Index (Rf)		0.17			0.11			0.10			0.15	
Classification		Low			Low			Low			Low	
Critical Viscosity Temperature (°F)		2142			2271			2256			2351	
Slag Viscosity* (Poise)												
at 2,300°F		140			1048			392			964	
at 2,600°F		18			101			41			91	

* Calculated values; ash viscosity data was not experimentally determined.

Slagging Index Classification		Fouling Index Classification	
Low	Rs < 0.6	Low	Rf < 0.2
Medium	0.6 < Rs < 2.0	Medium	0.2 < Rf < 0.5
High	2.0 < Rs < 2.6	High	0.5 < Rf < 1.0
Severe	2.6 < Rs	Severe	1.0 < Rf

18.2 percent to 8.2 percent in Test 1, and to 9.0 percent in Test 2. For the commercially-cleaned coal sample collected at Watson Generating Station, the ash was reported as 8.8 percent.

Ultimate analysis. Among other things, an ultimate analysis summarizes the organic constituents of the coal and is a convenient and uniform method of comparing coals. An ultimate analysis also is required by boiler operators for air requirements, heat losses, and weight of products of combustion. As with the proximate analysis, cleaning produces some significant changes. A large reduction in percent ash caused approximately 14 percent increase in carbon, hydrogen, nitrogen, and approximately 40 percent increase in oxygen.

Heating Value. Heating value increased as expected with coal cleaning. Heating value increased from 12,112 Btu/lb for the raw coal blend to clean coal values of 13,855 Btu/lb from Test 1, 13,696 Btu/lb from Test 2, and 13,426 Btu/lb for the commercially-cleaned coal sample collected at Watson Generating Station.

Hardgrove Grindability Index. Hardgrove Grindability Index (HGI) is a measurement of how well a coal can be pulverized in a pulverizer as compared to a reference coal. For this coal the Hardgrove Grindability Index did not change appreciably when cleaned. In fact the changes are almost within the ASTM accepted reproducibility limits of ASTM's test. However, the reduction in pyrite from 3.48 percent in the raw coal blend to 0.97 percent, 1.18 percent, and 0.71 percent in the cleaned coals should improve pulverizer performance. Also, the increased heating value resulting from the cleaning will decrease the energy required by the pulverizer by decreasing the amount of coal required to be pulverized.

Ash Constituents. Coal cleaning can affect ash constituents, potentially changing the behavior of ash in a boiler. Table 17 shows the effects of coal cleaning on a weight percent (Wt %) basis of the ash constituents. A graphical representation of the ash constituents is shown in Figures 20 and 21.

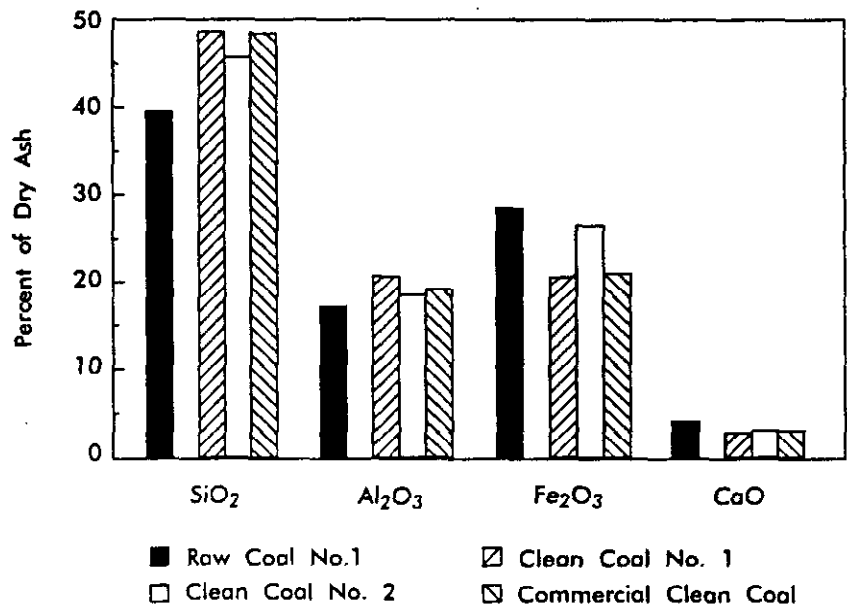


Figure 20. Ash Composition. Raw and Clean Coal Comparison, Illinois No. 2, 3 and 5 Seam Coal Blend, Gallatin County, Illinois.

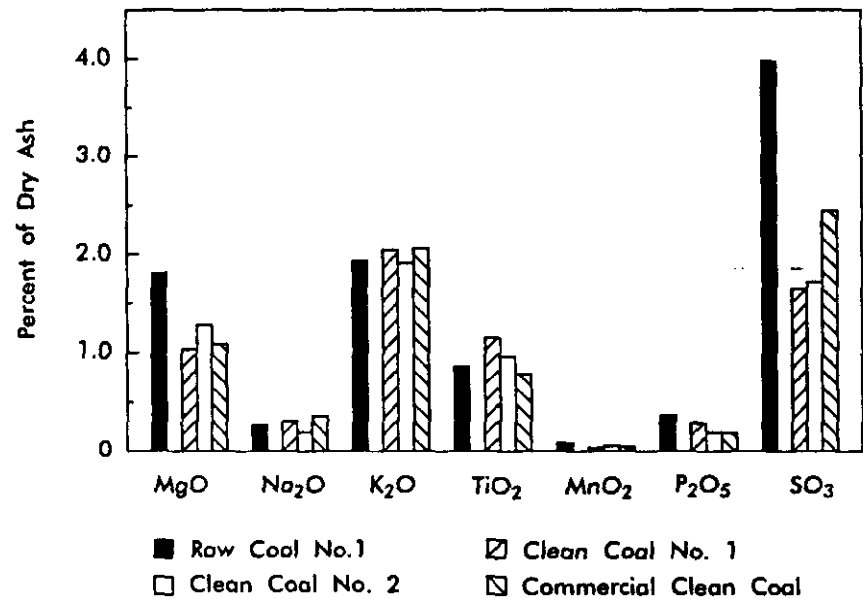


Figure 21. Ash Composition. Raw and Clean Coal Comparison, Illinois No. 2, 3 and 5 Seam Coal Blend, Gallatin County, Illinois.

Of particular interest to power generating companies are the concentrations of iron and sodium. In the blend of Illinois Seam coals tested in this project, iron decreased (from 28.5 percent to 20.6, 26.5, and 21.0 percent). Sodium showed little change (ranging from 0.20 to 0.36 percent). In fact, the difference in sodium content of the ash between raw and clean coals was within laboratory reproducibility. Negligible changes in sodium concentrations, negated by the decrease in iron, decrease the slagging and fouling index as shown in Table 17. The slagging index was reduced from severe in the raw coal to medium classification in the clean coals. The fouling index classification did not change even though the index was reduced very slightly. Iron and sodium, when in sufficient quantities, can contribute to boiler slagging and fouling but in this case reduction in slagging and no change in fouling potential can be expected. Along with reduction in ash concentrations, the ash loading is also significantly reduced with cleaning, decreasing from 15.1 lb ash/MBtu to 5.9, 6.5, and 6.6 lb ash/MBtu in the clean coals.

Ash Fusibility. Cleaning the blend of Illinois Seam coals did not change the ash fusion temperatures to any great extent and all were within the reproducibility of the measurement. Of the reported ash fusibility data, the differences between initial deformation and fluid temperatures are usually the primary concern. The larger the difference between these two measurements, the larger the operating range a furnace can have. The difference between initial deformation and fluid temperature of the blend of Illinois Seam coals (raw or cleaned) was in the range of 235-305 degrees Fahrenheit in reducing atmosphere and 80-175 degrees Fahrenheit in oxidizing atmosphere.

Chlorine Content. Chlorine content in coal is a major concern to boiler designers and operators. When burned, chlorine produces hydrochloric acid, which causes erosion and corrosion in the furnace and duct work. When cleaned, the chlorine concentration of the blended Illinois Seam coal did not change appreciably, indicating that the chlorine in these coals is widely seminated in the coal.

CONCLUSIONS

The following conclusions may be made about the Illinois Seam coals based on the results of this test program:

- The raw coal characterization indicates that the Illinois No. 3 Seam coal has a high slagging index while the Illinois No. 2 and 5 Seam coals have a severe slagging index. The fouling index of the Illinois No. 5 Seam coal has a medium fouling index and the Illinois No. 2 and 3 Seam coals have a low fouling index. The SO₂ emissions potential for the Illinois No. 2, 3, and 5 Seam raw coals is 8.26, 7.33, and 7.77 lb/MBtu, respectively, and the ash loading is 11.32, 17.88, and 13.80 lb/MBtu, respectively. All three Illinois No. 2, 3, and 5 Seam coals are ranked by ASTM criteria as a high volatile A bituminous coal and have a dry volatile content of 14.5, 20.7, and 16.8 percent, respectively.
- The impurities liberation investigation indicates that there is a general trend in ash liberation as the raw coals are crushed to finer topsizes. The Illinois No. 2 Seam coal showed slight improvement at ash levels less than eight percent when crushed to 28 mesh topsize and smaller. The Illinois No 3 showed slight improvement at ash levels less than 10 percent when crushed to 28 mesh topsize and smaller. The Illinois No. 5 showed slight improvement at ash levels less than nine percent when crushed to 28 mesh topsize and smaller. All three seams showed some improvement, but no large ash liberation occurs in the coals crushed to any size investigated. Sulfur-bearing minerals are liberated to some extent when all three raw coals are crushed to smaller topsizes, with greater improvement occurring in the Illinois No. 3 Seam coal.
- The coal cleaning evaluation and combustion characteristics comparison indicate that the quality of a blend of Illinois No. 2, 3, and 5 Seam coals can be improved by cleaning. A 3.80 lb SO₂/MBtu emissions potential and 5.94 lb ash/MBtu ash loading were achieved at a low yield (71 percent) and moderate energy recovery of 81.2 percent. In another flowsheet test, a 4.63 lb SO₂/MBtu emission potential and 6.54 lb ash/MBtu ash loading were achieved at a higher yield and higher energy recovery of 80 and 91 percent, respectively. In both cases the slagging index

classification was reduced from a severe classification to medium classification when compared to the raw coal classification. In both cases the fouling index classification of the raw coal was a low classification and did not change with cleaning.

- Once the information from this work is incorporated into CQIS and CQIM, this coal characterization of the Illinois No. 2, 3, and 5 Seam coals will provide valuable data. These data, along with the other models incorporated during the development of the Coal Quality Expert, can be used in predicting the impacts of coal quality on power plant costs.

APPENDIX A

Raw Coal Laboratory Analysis of the Illinois No. 2 Seam Coal



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 6-28-91
MASTER WARNER NO. 111761

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

DATE SAMPLED: 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 2183.90 KG

DATE RECEIVED: 06/10/91

OTHER ID: AS RECEIVED SAMPLE

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER	MAF BTU
+3"SQ	2.20	1.59	26.68	13.78	10413	26.44	14201
3"SQ X 1 1/2"SQ	3.96	1.67	19.69	10.27	11884	17.27	14798
1 1/2"SQ X 3/4"SQ	23.97	1.93	12.40	6.05	13116	9.22	14972
3/4"SQ X 3/8"SQ	22.24	2.00	11.06	4.62	13384	6.90	15048
3/8"SQ X 28M	36.49	2.15	15.06	4.54	12586	7.21	14817
28M X 100M	5.74	1.34	15.92	4.39	12243	7.16	14561
100M X 200M	1.17	1.49	26.69	6.69	10448	12.79	14250
200M X 0	4.22	.79	25.89	4.46	10679	8.34	14409

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER
+3"SQ	2.20	26.68	13.78	10413	26.44
+3"SQ X 1 1/2"SQ	6.16	22.19	11.53	11358	20.28
+3"SQ X 3/4"SQ	30.13	14.40	7.17	12757	11.23
+3"SQ X 3/8"SQ	52.37	12.98	6.09	13023	9.34
+3"SQ X 28M	88.87	13.84	5.45	12843	8.48
+3"SQ X 100M	94.60	13.96	5.39	12807	8.41
+3"SQ X 200M	95.78	14.12	5.40	12778	8.44
+3"SQ X 0	100.00	14.62	5.36	12689	8.44

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER
+3"SQ X 0	100.00	14.62	5.36	12689	8.44
3"SQ X 0	97.80	14.34	5.17	12741	8.11
1 1/2"SQ X 0	93.84	14.12	4.96	12777	7.76
3/4"SQ X 0	69.87	14.71	4.58	12660	7.23
3/8"SQ X 0	47.63	16.41	4.57	12323	7.41
28M X 0	11.13	20.84	4.66	11461	8.12
100M X 0	5.40	26.06	4.94	10629	9.29
200M X 0	4.22	25.89	4.46	10679	8.34

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY

APPROVED BY



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/21/91
MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/10/91

GROSS WEIGHT: 2183.90 KG.

OTHER ID: AS-RECEIVED SAMPLE

COMPOSITE FOR SIZE +3" SQ X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	1.67	2.63	1.86	14684
1.30	38.60	4.44	2.19	14419
1.35	29.07	7.93	2.95	13849
1.40	9.17	12.26	4.23	13072
1.60	7.44	17.06	5.56	12229
1.80	2.11	23.83	7.88	10868
2.00	0.89	36.28	13.08	8577
2.45	2.09	55.62	15.96	5385
2.45 SINK	8.93	72.75	22.84	2438

CUMULATIVE RESULTS FOR SIZE +3" SQ X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	1.67	2.63	1.86	14684
1.30	40.27	4.36	2.18	14430
1.35	69.34	5.86	2.50	14186
1.40	78.51	6.61	2.70	14056
1.60	85.95	7.51	2.95	13898
1.80	88.07	7.90	3.07	13825
2.00	88.96	8.19	3.17	13773
2.45	91.06	9.28	3.46	13580
2.45 SINK	99.99	14.95	5.19	12585

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	14.95	5.19	12585
1.30	98.31	15.16	5.25	12549
1.35	59.71	22.09	7.23	11340
1.40	30.64	35.52	11.29	8960
1.60	21.47	45.45	14.30	7204
1.80	14.03	60.50	18.94	4539
2.00	11.92	67.00	20.90	3416
2.45	11.02	69.50	21.53	2997
2.45 SINK	8.93	72.75	22.84	2438

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychter
Rychter



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/21/91
MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/10/91

GROSS WEIGHT: 2183.90 KG.

OTHER ID: AS-RECEIVED SAMPLE

FEED FOR SIZE +3" SQ

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	16.10	5.04	2.67	14431
1.35	23.45	7.59	3.48	13946
1.40	9.73	11.40	4.44	13270
1.60	11.35	26.96	5.49	10493
1.80	4.12	33.35	5.85	8038
2.00	2.90	37.26	16.32	8249
2.45	12.34	48.77	21.88	6534
2.45 SINK	20.00	53.65	35.82	4488

CUMULATIVE RESULTS FOR SIZE +3" SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	16.10	5.04	2.67	14431
1.35	39.55	6.55	3.15	14143
1.40	49.28	7.51	3.40	13971
1.60	60.63	11.15	3.80	13320
1.80	64.75	12.56	3.93	12984
2.00	67.65	13.62	4.46	12781
2.45	79.99	19.04	7.15	11817
2.45 SINK	99.99	25.97	12.88	10351

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	25.97	12.88	10351
1.30	99.99	25.97	12.88	10351
1.35	83.89	29.98	14.84	9568
1.40	60.44	38.67	19.25	7870
1.60	50.71	43.90	22.09	6833
1.80	39.36	48.79	26.88	5778
2.00	35.24	50.59	29.33	5514
2.45	32.34	51.79	30.50	5269
2.45 SINK	20.00	53.65	35.82	4488

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Light
Rocky



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/21/91
 MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
 SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2183.90 KG.

DATE SAMPLED: 01/30-31/91
 DATE RECEIVED: 06/10/91

OTHER ID: AS-RECEIVED SAMPLE

FEED FOR SIZE 3"SQ X 1 1/2"SQ

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	24.34	5.39	2.61	14340
1.35	31.71	7.89	3.28	13893
1.40	13.76	12.35	4.57	13119
1.60	8.04	17.56	7.95	12204
1.80	1.07	25.00	15.53	10573
2.00	1.06	36.39	19.58	8591
2.45	4.02	53.31	20.29	5684
2.45 SINK	16.00	60.60	37.51	3989

CUMULATIVE RESULTS FOR SIZE 3"SQ X 1 1/2"SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	24.34	5.39	2.61	14340
1.35	56.05	6.80	2.99	14087
1.40	69.81	7.90	3.30	13896
1.60	77.85	8.90	3.78	13722
1.80	78.92	9.11	3.94	13679
2.00	79.98	9.48	4.15	13611
2.45	84.00	11.57	4.92	13232
2.45 SINK	100.00	19.42	10.13	11753

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	19.42	10.13	11753
1.30	100.00	19.42	10.13	11753
1.35	75.66	23.93	12.55	10921
1.40	43.95	35.50	19.25	8777
1.60	30.19	46.06	25.94	6797
1.80	22.15	56.40	32.46	4835
2.00	21.08	57.99	33.32	4544
2.45	20.02	59.14	34.05	4329
2.45 SINK	16.00	60.60	37.51	3989

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ryley
R. Ryley



Goald Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/21/91
MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 2183.90 KG.

DATE RECEIVED: 06/10/91

OTHER ID: AS-RECEIVED SAMPLE

FEED FOR SIZE 1 1/2"SQ X 3/4"SQ

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	1.38	2.99	2.05	14759
1.30	35.52	5.00	2.32	14414
1.35	38.30	8.33	3.19	13863
1.40	10.62	13.22	4.96	12990
1.60	5.17	19.25	7.66	12051
1.80	1.08	27.51	14.45	10160
2.00	0.61	38.75	16.53	8411
2.45	1.56	52.96	18.75	5668
2.45 SINK	5.76	60.40	38.23	3507

CUMULATIVE RESULTS FOR SIZE 1 1/2"SQ X 3/4"SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	1.38	2.99	2.05	14759
1.30	36.90	4.92	2.31	14427
1.35	75.20	6.66	2.76	14140
1.40	85.82	7.47	3.03	13997
1.60	90.99	8.14	3.29	13887
1.80	92.07	8.37	3.42	13843
2.00	92.68	8.57	3.51	13807
2.45	94.24	9.30	3.76	13673
2.45 SINK	100.00	12.25	5.75	13087

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	12.25	5.75	13087
1.30	98.62	12.38	5.80	13064
1.35	63.10	16.53	7.76	12304
1.40	24.80	29.19	14.82	9895
1.60	14.18	41.14	22.20	7578
1.80	9.01	53.70	30.54	5011
2.00	7.93	57.27	32.73	4309
2.45	7.32	58.81	34.08	3968
2.45 SINK	5.76	60.40	38.23	3507

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rupp
R. Kelly



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galkitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormanig, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/21/91
 MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
 SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2183.90 KG.

DATE RECEIVED: 06/10/91

OTHER ID: AS-RECEIVED SAMPLE

FEED FOR SIZE 3/4"SQ X 3/8"SQ

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.78	3.63	2.15	14581
1.30	38.47	4.65	2.34	14429
1.35	36.88	7.87	2.90	13863
1.40	10.32	13.09	4.34	12993
1.60	6.27	20.19	6.99	11741
1.80	1.21	29.82	11.96	9926
2.00	0.68	34.51	16.62	8841
2.45	1.35	54.41	18.96	5317
2.45 SINK	4.04	65.76	29.78	3519

CUMULATIVE RESULTS FOR SIZE 3/4"SQ X 3/8"SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.78	3.63	2.15	14581
1.30	39.25	4.63	2.34	14432
1.35	76.13	6.20	2.61	14156
1.40	86.45	7.02	2.82	14017
1.60	92.72	7.91	3.10	13864
1.80	93.93	8.19	3.21	13813
2.00	94.61	8.38	3.31	13777
2.45	95.96	9.03	3.53	13658
2.45 SINK	100.00	11.32	4.59	13248

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	11.32	4.59	13248
1.30	99.22	11.38	4.61	13238
1.35	60.75	15.65	6.05	12484
1.40	23.87	27.66	10.90	10353
1.60	13.55	38.76	15.90	8342
1.80	7.28	54.76	23.58	5414
2.00	6.07	59.73	25.90	4515
2.45	5.39	62.92	27.07	3969
2.45 SINK	4.04	65.76	29.78	3519

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL

Thomash. Ryley
REPLY



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/21/91
 MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
 SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2183.90 KG.

DATE RECEIVED: 06/10/91

OTHER ID: AS-RECEIVED SAMPLE

FEEED FOR SIZE 3/8" SQ X 28M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	3.07	2.41	1.77	14678
1.30	46.50	4.45	2.10	14362
1.35	22.55	8.32	2.84	13746
1.40	7.09	12.81	4.11	12906
1.60	6.48	19.62	6.24	11682
1.80	1.90	29.92	9.74	9847
2.00	0.87	40.43	13.07	7806
2.45	2.07	59.17	13.13	4896
2.45 SINK	9.46	78.73	15.11	1825

CUMULATIVE RESULTS FOR SIZE 3/8" SQ X 28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	3.07	2.41	1.77	14678
1.30	49.57	4.32	2.08	14382
1.35	72.12	5.57	2.32	14183
1.40	79.21	6.22	2.48	14069
1.60	85.69	7.23	2.76	13888
1.80	87.59	7.73	2.91	13800
2.00	88.46	8.05	3.01	13741
2.45	90.53	9.22	3.24	13539
2.45 SINK	99.99	15.79	4.37	12431

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	15.79	4.37	12431
1.30	96.92	16.22	4.45	12360
1.35	50.42	27.07	6.62	10513
1.40	27.87	42.24	9.67	7897
1.60	20.78	52.28	11.57	6189
1.80	14.30	67.08	13.99	3699
2.00	12.40	72.78	14.64	2757
2.45	11.53	75.22	14.75	2376
2.45 SINK	9.46	78.73	15.11	1825

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Raftery
R. Raftery



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/21/91
 MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
 SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2183.90 KG.

DATE SAMPLED: 01/30-31/91
 DATE RECEIVED: 06/10/91

OTHER ID: AS-RECEIVED SAMPLE

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.37	2.01	1.68	14617
1.30	47.69	2.04	1.79	14759
1.35	16.69	5.67	2.36	13994
1.40	8.47	9.04	2.87	13438
1.60	8.35	14.22	4.00	12592
1.80	2.22	26.76	7.02	10446
2.00	0.75	38.53	10.12	8179
2.45	1.64	57.82	11.71	5319
2.45 SINK	13.82	79.53	16.37	1672

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.37	2.01	1.68	14617
1.30	48.06	2.04	1.79	14758
1.35	64.75	2.98	1.94	14561
1.40	73.22	3.68	2.04	14431
1.60	81.57	4.76	2.24	14243
1.80	83.79	5.34	2.37	14142
2.00	84.54	5.63	2.44	14089
2.45	86.18	6.63	2.62	13922
2.45 SINK	100.00	16.70	4.52	12229

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	16.70	4.52	12229
1.30	99.63	16.76	4.53	12221
1.35	51.94	30.27	7.04	9890
1.40	35.25	41.92	9.26	7947
1.60	26.78	52.31	11.28	6210
1.80	18.43	69.57	14.57	3318
2.00	16.21	75.44	15.61	2342
2.45	15.46	77.23	15.88	2059
2.45 SINK	13.82	79.53	16.37	1672

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Light
Realty



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0444
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/21/91
MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 2183.90 KG.

DATE SAMPLED: 01/30-31/91

DATE RECEIVED: 06/10/91

OTHER ID: AS-RECEIVED SAMPLE

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	2.35	1.17	1.48	14745
1.30	25.73	1.92	1.52	14632
1.35	14.13	3.13	1.77	14276
1.40	12.16	4.75	1.96	14135
1.60	10.97	8.57	2.24	13664
1.80	4.00	15.81	3.32	11933
2.00	1.12	31.09	5.88	9750
2.45	2.42	70.26	5.90	3399
2.45 SINK	27.13	82.30	17.44	1434

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	2.35	1.17	1.48	14745
1.30	28.08	1.86	1.52	14641
1.35	42.21	2.28	1.60	14519
1.40	54.37	2.83	1.68	14433
1.60	65.34	3.80	1.78	14304
1.80	69.34	4.49	1.86	14167
2.00	70.46	4.91	1.93	14097
2.45	72.88	7.08	2.06	13742
2.45 SINK	100.01	27.49	6.23	10403

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	27.49	6.23	10403
1.30	97.66	28.12	6.35	10299
1.35	71.93	37.49	8.07	8748
1.40	57.80	45.89	9.61	7397
1.60	45.64	56.86	11.65	5602
1.80	34.67	72.13	14.63	3051
2.00	30.67	79.48	16.11	1893
2.45	29.55	81.31	16.49	1595
2.45 SINK	27.13	82.30	17.44	1434

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rieft
Rieft



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galkitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/21/91
 MASTER WARNER NO. 111770

SAMPLE ID: ILLINOIS NO. 2 RUN #91013001
 SAMPLER #410001

OPERATING CO: PROJECT 90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2183.90 KG.

DATE SAMPLED: 01/30-31/91
 DATE RECEIVED: 06/10/91

OTHER ID: AS-RECEIVED SAMPLE

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	4.88	1.94	1.47	14396
1.35	13.40	2.16	1.56	14341
1.40	8.35	3.87	1.38	14263
1.60	30.04	6.57	1.03	14023
1.80	13.88	10.69	1.20	13288
2.00	2.80	23.49	2.13	10704
2.45	2.59	58.17	2.94	5255
2.45 SINK	24.06	82.97	14.04	1172

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	4.88	1.94	1.47	14396
1.35	18.28	2.10	1.54	14356
1.40	26.63	2.66	1.49	14327
1.60	56.67	4.73	1.24	14166
1.80	70.55	5.90	1.24	13993
2.00	73.35	6.57	1.27	13867
2.45	75.94	8.33	1.33	13574
2.45 SINK	100.00	26.29	4.39	10590

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	26.29	4.39	10590
1.30	100.00	26.29	4.39	10590
1.35	95.12	27.54	4.54	10395
1.40	81.72	31.70	5.02	9747
1.60	73.37	34.87	5.44	9234
1.80	43.33	54.49	8.49	5913
2.00	29.45	75.13	11.93	2437
2.45	26.65	80.56	12.96	1569
2.45 SINK	24.06	82.97	14.04	1172

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL

Thomas A. Rightman
Rocky



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/686-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7- 2-91
MASTER WARNER NO. 112419

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/13/91

GROSS WEIGHT: 1457.00 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+1 1/2"SQ	1.86	1.56	24.83	14.24	10732	26.51	14277
1 1/2"SQ X 3/4"SQ	17.89	2.05	13.56	7.37	12890	11.42	14912
3/4"SQ X 3/8"SQ	26.51	2.08	11.82	5.38	12813	8.39	14531
3/8"SQ X 28M	42.54	2.27	14.30	4.76	12725	7.47	14848
28M X 100M	5.27	.45	15.86	4.75	12357	7.68	14686
100M X 200M	1.91	.76	22.60	6.12	11249	10.87	14534
200M X 0	4.03	1.38	26.67	5.62	10148	11.07	13837

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+1 1/2"SQ	1.86	24.83	14.24	10732	26.51
+1 1/2"SQ X 3/4"SQ	19.75	14.62	8.02	12687	12.63
+1 1/2"SQ X 3/8"SQ	46.26	13.02	6.51	12759	10.19
+1 1/2"SQ X 28M	88.79	13.63	5.67	12743	8.89
+1 1/2"SQ X 100M	94.06	13.76	5.62	12721	8.83
+1 1/2"SQ X 200M	95.97	13.93	5.63	12692	8.86
+1 1/2"SQ X 0	100.00	14.45	5.63	12590	8.94

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+1 1/2"SQ X 0	100.00	14.45	5.63	12590	8.94
1 1/2"SQ X 0	98.14	14.25	5.46	12625	8.64
3/4"SQ X 0	80.25	14.40	5.04	12566	8.01
3/8"SQ X 0	53.74	15.68	4.87	12444	7.82
28M X 0	11.21	20.89	5.30	11374	9.31
100M X 0	5.94	25.36	5.78	10502	11.00
200M X 0	4.03	26.67	5.62	10148	11.07

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY

APPROVED BY



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/883-7765

DATE : 7- 1-91
 MASTER WARNER NO. 112427

C. G. , INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 1457.00 KG

DATE RECEIVED: 06/13/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR COMPOSITE +1 1/2" SQ X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.31	2.61	2.13	14405	0.00	0.00
1.30	39.10	4.38	2.21	14383	0.00	0.00
1.35	27.50	7.91	2.96	13866	0.00	0.00
1.40	7.96	12.16	4.29	13070	0.00	0.00
1.60	8.36	16.55	5.88	12188	0.00	0.00
1.80	1.86	24.88	9.19	10636	0.00	0.00
2.00	.98	35.67	13.39	8483	0.00	0.00
2.45	1.89	51.80	16.54	5468	0.00	0.00
2.45 SINK	9.04	70.41	27.15	2583	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +1 1/2" SQ X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.31	2.61	2.13	14405	0.00	0.00
1.30	42.41	4.24	2.20	14384	0.00	0.00
1.35	69.92	5.68	2.50	14181	0.00	0.00
1.40	77.87	6.35	2.68	14067	0.00	0.00
1.60	86.23	7.34	2.99	13885	0.00	0.00
1.80	88.09	7.71	3.12	13816	0.00	0.00
2.00	89.07	8.01	3.24	13758	0.00	0.00
2.45	90.96	8.92	3.51	13585	0.00	0.00
2.45 SINK	100.00	14.48	5.65	12590	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.48	5.65	12590	0.00	0.00
1.30	96.69	14.89	5.77	12528	0.00	0.00
1.35	57.59	22.03	8.19	11269	0.00	0.00
1.40	30.08	34.93	12.97	8895	0.00	0.00
1.60	22.13	43.12	16.09	7393	0.00	0.00
1.80	13.77	59.25	22.29	4484	0.00	0.00
2.00	11.91	64.60	24.33	3526	0.00	0.00
2.45	10.93	67.19	25.31	3082	0.00	0.00
2.45 SINK	9.04	70.41	27.15	2583	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ruffert
 RORVg



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/866-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/680-6865

DATE: 7-1-91
MASTER WARNER NO. 112427

C. G. I., INC.

1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPL R #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MIN-:

DATE SAMPLE 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 1457.00 KG

DATE RECEIVED: 06/13/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE +3/4"SQ

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	18	4.30	2.06	14424	0.00	0.00
1.30	38.22	4.80	2.29	14401	0.00	0.00
1.35	28.81	8.21	3.20	13931	0.00	0.00
1.40	10.75	12.56	4.90	12985	0.00	0.00
1.60	6.91	18.17	8.23	12004	0.00	0.00
1.80	1.02	28.37	14.36	10024	0.00	0.00
2.00	1.23	39.93	13.72	8066	0.00	0.00
2.45	1.89	44.33	24.28	7043	0.00	0.00
2.45 SINK	10.99	60.31	47.02	3761	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +3/4"SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	18	4.30	2.06	14424	0.00	0.00
1.30	38.40	4.79	2.29	14401	0.00	0.00
1.35	67.21	6.26	2.68	14200	0.00	0.00
1.40	77.96	7.13	2.99	14032	0.00	0.00
1.60	84.87	8.03	3.41	13867	0.00	0.00
1.80	85.89	8.27	3.54	13821	0.00	0.00
2.00	87.12	8.72	3.69	13740	0.00	0.00
2.45	89.01	9.47	4.12	13598	0.00	0.00
2.45 SINK	100.00	15.06	8.84	12517	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	15.06	8.84	12517	0.00	0.00
1.30	99.82	15.08	8.85	12513	0.00	0.00
1.35	61.60	21.46	12.92	11342	0.00	0.00
1.40	32.79	33.10	21.46	9068	0.00	0.00
1.60	22.04	43.11	29.54	7157	0.00	0.00
1.80	15.13	54.50	39.27	4944	0.00	0.00
2.00	14.11	56.39	41.07	4576	0.00	0.00
2.45	12.88	57.97	43.68	4243	0.00	0.00
2.45 SINK	10.99	60.31	47.02	3761	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rypke
Rypke



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/480-4765

DATE: 7-1-91
MASTER WARNER NO. 112427

C. Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/13/91

GROSS WEIGHT: 1457.00 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 3/4"SQ X 3/8"SQ

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.72	3.36	2.26	14557	0.00	0.00
1.30	40.72	4.77	2.32	14207	0.00	0.00
1.35	33.84	8.15	3.03	13864	0.00	0.00
1.40	8.97	13.19	4.47	12968	0.00	0.00
1.60	6.89	19.29	7.32	11872	0.00	0.00
1.80	1.34	28.33	13.36	10013	0.00	0.00
2.00	.77	33.88	19.53	8938	0.00	0.00
2.45	1.43	49.21	19.62	6451	0.00	0.00
2.45 SINK	5.32	63.03	32.86	3431	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 3/4"SQ X 3/8"SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.72	3.36	2.26	14557	0.00	0.00
1.30	41.44	4.74	2.32	14214	0.00	0.00
1.35	75.28	6.27	2.64	14056	0.00	0.00
1.40	84.25	7.01	2.84	13940	0.00	0.00
1.60	91.14	7.94	3.17	13784	0.00	0.00
1.80	92.48	8.23	3.32	13729	0.00	0.00
2.00	93.25	8.45	3.46	13690	0.00	0.00
2.45	94.68	9.06	3.70	13581	0.00	0.00
2.45 SINK	100.00	11.93	3.25	13041	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	11.93	3.25	13041	0.00	0.00
1.30	99.28	11.99	3.27	13030	0.00	0.00
1.35	58.56	17.02	7.32	12210	0.00	0.00
1.40	24.72	29.17	13.20	9947	0.00	0.00
1.60	15.75	38.27	18.17	8227	0.00	0.00
1.80	8.86	52.02	26.62	5392	0.00	0.00
2.00	7.52	57.42	28.98	4569	0.00	0.00
2.45	6.75	60.11	30.06	4070	0.00	0.00
2.45 SINK	5.32	63.03	32.86	3431	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas G. Rychter
P.E. Only



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/891-7755
DATE: 7-1-91
MASTER WARNER NO. 112427

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/13/91

GROSS WEIGHT: 1457.00 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 3/8"SQ X 28M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	7.00	2.58	2.13	14383	0.00	0.00
1.30	39.93	4.41	2.18	14449	0.00	0.00
1.35	26.98	7.93	2.90	13813	0.00	0.00
1.40	6.14	12.55	4.19	13018	0.00	0.00
1.60	7.68	18.72	6.31	11682	0.00	0.00
1.80	1.72	30.16	10.65	9697	0.00	0.00
2.00	.80	38.27	14.11	7860	0.00	0.00
2.45	1.77	36.27	14.42	5319	0.00	0.00
2.45 SINK	7.98	74.48	18.45	2219	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 3/8"SQ X 28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	7.00	2.58	2.13	14383	0.00	0.00
1.30	46.93	4.14	2.18	14439	0.00	0.00
1.35	73.90	5.52	2.44	14211	0.00	0.00
1.40	80.05	6.06	2.57	14119	0.00	0.00
1.60	87.73	7.17	2.90	13906	0.00	0.00
1.80	89.45	7.61	3.05	13825	0.00	0.00
2.00	90.25	7.88	3.15	13772	0.00	0.00
2.45	92.02	8.82	3.36	13609	0.00	0.00
2.45 SINK	100.00	14.06	4.57	12700	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.06	4.57	12700	0.00	0.00
1.30	93.00	14.92	4.75	12574	0.00	0.00
1.35	53.07	22.83	6.69	11163	0.00	0.00
1.40	26.10	38.22	10.60	8422	0.00	0.00
1.60	19.95	46.13	12.57	7008	0.00	0.00
1.80	12.27	63.28	16.49	4083	0.00	0.00
2.00	10.55	68.68	17.45	3167	0.00	0.00
2.45	9.75	71.18	17.72	2782	0.00	0.00
2.45 SINK	7.98	74.48	18.45	2219	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Light
RE Kelly



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/985-1785

DATE: 7-1-91
MASTER WARNER NO. 112427

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/13/91

GROSS WEIGHT: 1457.00 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.05	1.73	1.84	14769	0.00	0.00
1.30	53.99	2.33	1.82	14539	0.00	0.00
1.35	11.38	6.31	2.49	13915	0.00	0.00
1.40	7.64	9.00	2.93	13411	0.00	0.00
1.60	8.20	14.61	4.10	12434	0.00	0.00
1.80	1.87	28.94	7.62	10004	0.00	0.00
2.00	.79	37.03	9.96	8530	0.00	0.00
2.45	1.51	56.20	12.17	5308	0.00	0.00
2.45 SINK	13.57	78.05	16.87	1809	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.05	1.73	1.84	14769	0.00	0.00
1.30	55.04	2.31	1.82	14543	0.00	0.00
1.35	66.42	3.00	1.93	14435	0.00	0.00
1.40	74.06	3.62	2.04	14330	0.00	0.00
1.60	82.26	4.71	2.24	14141	0.00	0.00
1.80	84.13	5.25	2.36	14049	0.00	0.00
2.00	84.92	5.55	2.43	13997	0.00	0.00
2.45	86.43	6.43	2.60	13846	0.00	0.00
2.45 SINK	100.00	16.15	4.54	12212	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	16.15	4.54	12212	0.00	0.00
1.30	98.95	16.31	4.57	12185	0.00	0.00
1.35	44.96	33.09	7.87	9359	0.00	0.00
1.40	33.58	42.17	9.70	7815	0.00	0.00
1.60	25.94	51.93	11.68	6167	0.00	0.00
1.80	17.74	69.19	15.19	3270	0.00	0.00
2.00	15.87	73.93	16.08	2477	0.00	0.00
2.45	15.08	75.86	16.40	2160	0.00	0.00
2.45 SINK	13.57	78.05	16.87	1809	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rafter
ROR



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/889-9965
 DATE : 7- 1-91
 MASTER WARNER NO. 112427

C. G., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINES:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/13/91

GROSS WEIGHT: 1457.00 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.58	1.33	1.63	14686	0.00	0.00
1.30	34.14	1.69	1.74	14674	0.00	0.00
1.35	13.89	3.64	2.02	14314	0.00	0.00
1.40	10.14	6.09	2.16	13968	0.00	0.00
1.60	12.10	9.43	2.44	13399	0.00	0.00
1.80	3.32	15.18	3.06	12504	0.00	0.00
2.00	.74	32.16	5.88	9289	0.00	0.00
2.45	1.91	61.50	6.51	4406	0.00	0.00
2.45 SINK	21.19	81.14	19.24	1504	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.58	1.33	1.63	14686	0.00	0.00
1.30	36.72	1.67	1.73	14675	0.00	0.00
1.35	50.60	2.21	1.81	14576	0.00	0.00
1.40	60.74	2.86	1.87	14474	0.00	0.00
1.60	72.84	3.95	1.96	14296	0.00	0.00
1.80	76.16	4.44	2.01	14218	0.00	0.00
2.00	76.90	4.71	2.05	14170	0.00	0.00
2.45	78.81	6.08	2.16	13934	0.00	0.00
2.45 SINK	100.00	21.99	5.78	11300	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	21.99	5.78	11300	0.00	0.00
1.30	97.42	22.53	5.89	11210	0.00	0.00
1.35	63.28	33.77	8.12	9342	0.00	0.00
1.40	49.40	42.25	9.84	7944	0.00	0.00
1.60	39.26	51.58	11.83	6388	0.00	0.00
1.80	27.16	70.36	16.01	3263	0.00	0.00
2.00	23.84	78.05	17.81	1978	0.00	0.00
2.45	23.10	79.52	18.19	1744	0.00	0.00
2.45 SINK	21.19	81.14	19.24	1504	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rypke
R. Kelly



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galtzlin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/680-4785

DATE : 7- 1-91
 MASTER WARNER NO. 112427

C. G., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/13/91

GROSS WEIGHT: 1457.00 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.10	1.50	1.72	14639	0.00	0.00
1.30	6.92	2.96	1.74	14318	0.00	0.00
1.35	12.53	4.24	1.53	14100	0.00	0.00
1.40	6.15	4.58	2.15	14062	0.00	0.00
1.60	30.63	7.00	1.29	13883	0.00	0.00
1.80	10.06	11.15	1.68	13040	0.00	0.00
2.00	3.38	24.20	3.61	10005	0.00	0.00
2.45	6.73	50.68	10.10	2530	0.00	0.00
2.45 SINK	23.50	79.60	15.42	967	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.10	1.50	1.72	14639	0.00	0.00
1.30	7.02	2.94	1.74	14322	0.00	0.00
1.35	19.55	3.77	1.60	14180	0.00	0.00
1.40	25.70	3.96	1.73	14152	0.00	0.00
1.60	56.33	5.61	1.49	14006	0.00	0.00
1.80	66.39	6.45	1.52	13859	0.00	0.00
2.00	69.77	7.31	1.62	13673	0.00	0.00
2.45	76.50	11.13	2.37	12692	0.00	0.00
2.45 SINK	100.00	27.22	5.43	9937	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	27.22	5.43	9937	0.00	0.00
1.30	99.90	27.24	5.44	9932	0.00	0.00
1.35	92.98	29.05	5.71	9606	0.00	0.00
1.40	80.45	32.92	6.37	8906	0.00	0.00
1.60	74.30	35.26	6.71	8479	0.00	0.00
1.80	43.67	55.09	10.52	4688	0.00	0.00
2.00	33.61	68.24	13.17	2189	0.00	0.00
2.45	30.23	73.16	14.24	1315	0.00	0.00
2.45 SINK	23.50	79.60	15.42	967	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
R. K. Kelly



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/856-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/632-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/480-5785

DATE: 7- 2-91
MASTER WARNER NO. 113420

C. G. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2
SAMPLED BY: CUSTOMER PROVIDED
MINE:
LOCATION:

DATE SAMPLED: 01/30-31/91

DATE RECEIVED: 06/19/91

WEATHER:
GROSS WEIGHT: 723.60 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

CERTIFICATE OF ANALYSIS

				AS RECEIVED	DRY BASIS
MOISTURE	D2961	D3302	D3173	9.86%	XXX
VOLATILE MATTER		D3175		30.49%	33.83%
FIXED CARBON		D3172		46.62%	51.72%
ASH		D3174		13.03%	14.45%
SULFUR		D4239	METHOD 3.3	4.75%	5.27%
BTU/LB		D2015		11507	12766
MAF BTU/LB					14922
LBS OF SO2 PER MILLION BTU					8.25
HARDGROVE GRINDABILITY INDEX				62	
		D409			
FORMS OF SULFUR		D2492			
PYRITIC SULFUR				3.28%	3.64%
SULFATE SULFUR				.18%	.20%
ORGANIC SULFUR				1.29%	1.43%
CHLORINE		D4208		.28%	.31%
EQUILIBRIUM MOISTURE		D1412		4.13%	
ASH FUSION TEMPERATURE(S)					
D1857 - ELECTRIC METHOD				REDUCING ATMOSPHERE	
INITIAL DEFORMATION TEMPERATURE				1960	
SOFTENING TEMPERATURE				2000	
HEMISPHERICAL TEMPERATURE				2130	
FLUID TEMPERATURE				2300	
D1857				OXIDIZING ATMOSPHERE	
INITIAL DEFORMATION TEMPERATURE				2515	

PAGE 1 OF 2



BLACK SEAL ANALYSIS

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE: 7- 2-91
WARNER NO 113420

CERTIFICATE OF ANALYSIS (CONT.)

	AS RECEIVED	DRY BASIS
SOFTENING TEMPERATURE		2550
HEMISPHERICAL TEMPERATURE		2570
FLUID TEMPERATURE		2580

ASH MINERAL COMPOSITION

D2795 D3682

SILICON DIOXIDE	42.39
ALUMINIUM OXIDE	15.45
FERRIC OXIDE	34.57
TITANIUM DIOXIDE	.80
PHOSPHORUS PENTOXIDE	.83
CALCIUM OXIDE	1.55
MAGNESIUM OXIDE	.76
SODIUM OXIDE	.17
POTASSIUM OXIDE	1.62
SULFUR TRIOXIDE	1.27
PERCENT SOLIDS	90.14%

LITHIUM OXIDE 107.6 ppm
MANGANESE DIOXIDE 312.5

APPROVED BY *Thomas A. Rupp*

APPROVED BY *Reedy*

PAGE 2 OF 2



BLACK SEAL ANALYSIS

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7- 1-91
MASTER WARNER NO. 113420

C. Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MIINE:

DATE SAMPLED: 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/19/91

GROSS WEIGHT: 723.60 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+3/8"SQ	2.47	2.04	18.07	7.30	12135	12.02	14811
3/8"SQ X 28M	82.79	2.17	13.23	5.55	12899	8.60	14866
28M X 100M	7.90	.85	15.27	4.80	12478	7.69	14726
100M X 200M	2.76	.98	20.50	6.12	11628	10.52	14626
200M X 0	4.08	1.68	20.17	4.01	11536	6.95	14449

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+3/8"SQ	2.47	18.07	7.30	12135	12.02
+3/8"SQ X 28M	85.26	13.37	5.60	12877	8.69
+3/8"SQ X 100M	93.16	13.53	5.53	12843	8.60
+3/8"SQ X 200M	95.92	13.74	5.55	12808	8.66
+3/8"SQ X 0	100.00	14.00	5.49	12756	8.60

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+3/8"SQ X 0	100.00	14.00	5.49	12756	8.60
3/8"SQ X 0	97.53	13.89	5.44	12772	8.51
28M X 0	14.74	17.61	4.83	12058	8.00
100M X 0	6.84	20.30	4.86	11573	8.39
200M X 0	4.08	20.17	4.01	11536	6.95

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY

APPROVED BY



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/832-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/682-4765

DATE: 7-1-91
 MASTER WARNER NO. 113426

C. Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/19/91

GROSS WEIGHT: 723.60 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR COMPOSITE +3/8" SQ X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.75	2.40	1.85	14728	0.00	0.00
1.30	40.67	4.07	2.07	14469	0.00	0.00
1.35	27.61	7.80	2.89	13845	0.00	0.00
1.40	7.40	12.82	4.23	12932	0.00	0.00
1.60	7.48	18.25	6.06	11987	0.00	0.00
1.80	3.93	18.59	5.46	11774	0.00	0.00
2.00	.84	37.65	13.88	8187	0.00	0.00
2.45	1.69	54.55	15.23	5131	0.00	0.00
2.45 SINK	8.65	71.61	24.12	2708	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +3/8" SQ X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.75	2.40	1.85	14728	0.00	0.00
1.30	42.41	4.00	2.06	14480	0.00	0.00
1.35	70.02	5.50	2.39	14230	0.00	0.00
1.40	77.42	6.20	2.56	14106	0.00	0.00
1.60	84.90	7.26	2.87	13919	0.00	0.00
1.80	88.83	7.76	2.98	13824	0.00	0.00
2.00	89.67	8.04	3.09	13771	0.00	0.00
2.45	91.35	8.90	3.31	13612	0.00	0.00
2.45 SINK	100.00	14.32	5.11	12669	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.32	5.11	12669	0.00	0.00
1.30	98.25	14.53	5.17	12632	0.00	0.00
1.35	57.59	21.92	7.36	11335	0.00	0.00
1.40	29.88	34.93	11.47	9024	0.00	0.00
1.60	22.58	42.18	13.85	7743	0.00	0.00
1.80	15.10	54.03	17.70	5641	0.00	0.00
2.00	11.17	66.48	22.01	3486	0.00	0.00
2.45	10.33	68.83	22.67	3103	0.00	0.00
2.45 SINK	8.65	71.61	24.12	2708	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ricketts
P. O. Kelly



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/880-6726

DATE : 7- 1-91
MASTER WARNER NO. 113426

C. G. , INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MIKE:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 723.60 KG

DATE SAMPLED: 01/30-31/91

DATE RECEIVED: 06/19/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE +28M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.99	2.41	1.85	14724	0.00	0.00
1.30	41.06	4.28	2.10	14450	0.00	0.00
1.35	30.46	7.97	2.93	13827	0.00	0.00
1.40	7.60	13.48	4.44	12850	0.00	0.00
1.60	6.94	20.12	6.88	11674	0.00	0.00
1.80	1.76	29.72	10.80	9884	0.00	0.00
2.00	.82	38.93	15.19	7969	0.00	0.00
2.45	1.66	54.14	16.13	5259	0.00	0.00
2.45 SINK	7.71	69.38	26.27	3029	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.99	2.41	1.85	14724	0.00	0.00
1.30	43.05	4.19	2.09	14462	0.00	0.00
1.35	73.51	5.76	2.44	14199	0.00	0.00
1.40	81.11	6.48	2.63	14073	0.00	0.00
1.60	88.05	7.56	2.96	13884	0.00	0.00
1.80	89.81	7.99	3.12	13805	0.00	0.00
2.00	90.63	8.27	3.22	13753	0.00	0.00
2.45	92.29	9.10	3.46	13600	0.00	0.00
2.45 SINK	100.00	13.74	5.22	12785	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	13.74	5.22	12785	0.00	0.00
1.30	98.01	13.97	5.28	12745	0.00	0.00
1.35	56.95	20.97	7.58	11517	0.00	0.00
1.40	26.49	35.91	12.92	8860	0.00	0.00
1.60	18.89	44.93	16.33	7254	0.00	0.00
1.80	11.95	59.33	21.82	4687	0.00	0.00
2.00	10.19	64.45	23.73	3790	0.00	0.00
2.45	9.37	66.68	24.47	3424	0.00	0.00
2.45 SINK	7.71	69.38	26.27	3029	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas L. Rhydt
 Rhydt



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/680-9905

DATE: 7-1-91
 MASTER WARNER NO. 113426

C. G., INC.

1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MIKE:

DATE SAMPLED: 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 723.60 KG

DATE RECEIVED: 06/19/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.43	2.39	1.84	14961	0.00	0.00
1.30	58.70	2.88	1.89	14554	0.00	0.00
1.35	9.61	7.32	2.72	13826	0.00	0.00
1.40	6.58	10.55	3.34	13224	0.00	0.00
1.60	8.19	15.44	4.57	12369	0.00	0.00
1.80	2.07	28.75	8.16	10123	0.00	0.00
2.00	.74	37.83	11.34	8385	0.00	0.00
2.45	1.50	55.00	13.25	5614	0.00	0.00
2.45 SINK	12.18	77.49	16.98	1975	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.43	2.39	1.84	14961	0.00	0.00
1.30	59.13	2.88	1.89	14557	0.00	0.00
1.35	68.74	3.50	2.01	14455	0.00	0.00
1.40	75.32	4.11	2.13	14347	0.00	0.00
1.60	83.51	5.22	2.37	14153	0.00	0.00
1.80	85.58	5.79	2.51	14056	0.00	0.00
2.00	86.32	6.07	2.58	14007	0.00	0.00
2.45	87.82	6.90	2.76	13864	0.00	0.00
2.45 SINK	100.00	15.50	4.50	12416	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	15.50	4.50	12416	0.00	0.00
1.30	99.57	15.56	4.51	12405	0.00	0.00
1.35	40.87	33.77	8.26	9318	0.00	0.00
1.40	31.26	41.90	9.96	7932	0.00	0.00
1.60	24.68	50.26	11.73	6521	0.00	0.00
1.80	16.49	67.55	15.28	3617	0.00	0.00
2.00	14.42	73.12	16.30	2683	0.00	0.00
2.45	13.68	75.03	16.57	2374	0.00	0.00
2.45 SINK	12.18	77.49	16.98	1975	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychter
 RAL



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/480-6785
DATE: 7-1-91
MASTER WARNER NO. 113426

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/19/91

GROSS WEIGHT: 723.60 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.45	1.56	1.53	14745	0.00	0.00
1.30	30.58	2.42	1.60	14784	0.00	0.00
1.35	21.84	3.27	1.89	14349	0.00	0.00
1.40	9.06	5.85	2.16	13563	0.00	0.00
1.60	13.32	9.29	2.50	13527	0.00	0.00
1.80	2.83	15.05	3.62	12507	0.00	0.00
2.00	.72	32.39	7.46	9495	0.00	0.00
2.45	1.97	62.34	7.34	4711	0.00	0.00
2.45 SINK	19.24	79.60	19.99	1641	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.45	1.56	1.53	14745	0.00	0.00
1.30	31.03	2.41	1.59	14784	0.00	0.00
1.35	52.86	2.76	1.72	14604	0.00	0.00
1.40	61.92	3.21	1.78	14452	0.00	0.00
1.60	75.24	4.29	1.91	14288	0.00	0.00
1.80	78.07	4.68	1.97	14223	0.00	0.00
2.00	78.79	4.93	2.02	14180	0.00	0.00
2.45	80.76	6.33	2.15	13949	0.00	0.00
2.45 SINK	100.00	20.43	5.58	11581	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	20.43	5.58	11581	0.00	0.00
1.30	99.55	20.51	5.60	11567	0.00	0.00
1.35	68.97	28.54	7.38	10141	0.00	0.00
1.40	47.14	40.24	9.92	8192	0.00	0.00
1.60	38.08	48.43	11.76	6914	0.00	0.00
1.80	24.76	69.48	14.75	3356	0.00	0.00
2.00	21.93	76.50	18.44	2175	0.00	0.00
2.45	21.21	78.00	18.82	1927	0.00	0.00
2.45 SINK	19.24	79.60	19.99	1641	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychter
RCH



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/981-1255

DATE: 7-1-91
 MASTER WARNER NO. 113426

C. G. , INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/19/91

GROSS WEIGHT: 723.60 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.05	1.71	1.59	14705	0.00	0.00
1.30	4.36	1.87	1.63	14623	0.00	0.00
1.35	6.71	3.00	1.69	14483	0.00	0.00
1.40	3.77	4.07	1.49	14375	0.00	0.00
1.60	13.44	7.29	1.34	13879	0.00	0.00
1.80	53.51	10.31	1.66	13170	0.00	0.00
2.00	1.55	24.92	3.71	10000	0.00	0.00
2.45	2.38	55.53	8.90	2709	0.00	0.00
2.45 SINK	14.23	79.81	15.35	1266	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.05	1.71	1.59	14705	0.00	0.00
1.30	4.41	1.87	1.63	14624	0.00	0.00
1.35	11.12	2.55	1.67	14539	0.00	0.00
1.40	14.89	2.94	1.62	14498	0.00	0.00
1.60	28.33	5.00	1.49	14204	0.00	0.00
1.80	81.84	8.47	1.60	13528	0.00	0.00
2.00	83.39	8.78	1.64	13462	0.00	0.00
2.45	85.77	10.07	1.84	13170	0.00	0.00
2.45 SINK	100.00	20.00	3.76	11476	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	20.00	3.76	11476	0.00	0.00
1.30	99.95	20.00	3.76	11474	0.00	0.00
1.35	95.59	20.83	3.86	11331	0.00	0.00
1.40	88.88	22.18	4.02	11093	0.00	0.00
1.60	85.11	22.98	4.13	10947	0.00	0.00
1.80	71.67	25.92	4.66	10398	0.00	0.00
2.00	18.16	71.94	13.51	2227	0.00	0.00
2.45	16.61	76.33	14.42	1501	0.00	0.00
2.45 SINK	14.23	79.81	15.35	1266	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rept...
RLK



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 6-27-91
MASTER WARNER NO. 119804

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/21/91

GROSS WEIGHT: 409.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+28M	3.83	1.62	19.68	7.44	11934	12.46	14857
28M X 100M	56.99	.73	12.22	4.78	13042	7.32	14856
100M X 200M	12.79	.99	13.58	5.36	12838	8.34	14855
200M X 0	26.39	1.34	18.16	5.30	11851	8.94	14480

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+28M	3.83	19.68	7.44	11934	12.46
+28M X 100M	60.82	12.69	4.95	12972	7.62
+28M X 200M	73.61	12.84	5.02	12949	7.75
+28M X 0	100.00	14.25	5.10	12659	8.05

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+28M X 0	100.00	14.25	5.10	12659	8.05
28M X 0	96.17	14.03	5.00	12688	7.87
100M X 0	39.18	16.66	5.32	12173	8.73
200M X 0	26.39	18.16	5.30	11851	8.94

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY

APPROVED BY



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galtzain Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmonia, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 6-27-91
MASTER WARNER NO. 113809

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINI:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 409.30 KG

DATE SAMPLED: 01/30-31/91

DATE RECEIVED: 06/21/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR COMPOSITE +28M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	44.57	2.69	1.88	14676	0.00	0.00
1.30	44.03	3.15	2.07	14890	0.00	0.00
1.35	16.64	5.95	2.35	14066	0.00	0.00
1.40	9.25	9.25	2.95	13504	0.00	0.00
1.60	13.16	14.25	3.81	12667	0.00	0.00
1.80	3.28	22.68	6.20	11102	0.00	0.00
2.00	1.28	35.35	10.19	8485	0.00	0.00
2.45	1.79	54.67	12.54	5139	0.00	0.00
2.45 SINK	10.01	73.01	23.11	2178	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +28M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	44.57	2.69	1.88	14676	0.00	0.00
1.30	44.60	3.15	2.07	14888	0.00	0.00
1.35	61.24	3.91	2.15	14664	0.00	0.00
1.40	70.49	4.61	2.25	14512	0.00	0.00
1.60	83.64	6.13	2.50	14222	0.00	0.00
1.80	86.93	6.75	2.64	14104	0.00	0.00
2.00	88.20	7.16	2.75	14023	0.00	0.00
2.45	89.99	8.11	2.94	13846	0.00	0.00
2.45 SINK	100.00	14.60	4.96	12679	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.60	4.96	12679	0.00	0.00
1.30	99.43	14.67	4.98	12667	0.00	0.00
1.35	83.40	23.83	7.28	10500	0.00	0.00
1.40	68.76	31.80	9.40	9541	0.00	0.00
1.60	29.51	38.49	11.42	8299	0.00	0.00
1.80	16.36	57.56	17.55	4786	0.00	0.00
2.00	13.07	66.82	20.40	3200	0.00	0.00
2.45	11.80	70.22	21.51	2627	0.00	0.00
2.45 SINK	10.01	73.01	23.11	2178	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Raftery
Raftery



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 6-27-91
MASTER WARNER NO. 113809

G. O. L. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINI
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/21/91

GROSS WEIGHT: 409.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE +100M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.76	3.01	1.93	14589	0.00	0.00
1.30	53.37	3.66	2.14	14945	0.00	0.00
1.35	14.66	7.63	2.66	13807	0.00	0.00
1.40	9.19	11.44	3.45	13154	0.00	0.00
1.60	10.09	17.69	5.04	12071	0.00	0.00
1.80	2.10	29.88	9.47	9971	0.00	0.00
2.00	1.02	37.78	12.91	8503	0.00	0.00
2.45	1.24	51.85	16.02	6123	0.00	0.00
2.45 SINK	7.57	70.86	25.31	2793	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.76	3.01	1.93	14589	0.00	0.00
1.30	54.13	3.66	2.14	14940	0.00	0.00
1.35	68.79	4.50	2.25	14698	0.00	0.00
1.40	77.98	5.32	2.39	14516	0.00	0.00
1.60	88.07	6.73	2.69	14236	0.00	0.00
1.80	90.17	7.27	2.85	14137	0.00	0.00
2.00	91.19	7.62	2.96	14073	0.00	0.00
2.45	92.43	8.21	3.14	13967	0.00	0.00
2.45 SINK	100.00	12.95	4.82	13121	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	12.95	4.82	13121	0.00	0.00
1.30	99.24	13.03	4.84	13110	0.00	0.00
1.35	45.87	23.92	7.98	10976	0.00	0.00
1.40	31.21	31.58	10.48	9646	0.00	0.00
1.60	22.02	39.98	13.41	8182	0.00	0.00
1.80	11.93	58.83	20.49	4894	0.00	0.00
2.00	9.83	65.01	22.85	3808	0.00	0.00
2.45	8.81	68.18	24.00	3262	0.00	0.00
2.45 SINK	7.57	70.86	25.31	2793	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
Rocky



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galtzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 6-27-91
MASTER WARNER NO. 113809

C. Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINI:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 409.30 KG

DATE RECEIVED: 06/21/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	53	1.47	1.77	15155	0.00	0.00
1.30	43.17	2.00	2.04	14735	0.00	0.00
1.35	23.70	5.43	2.31	14201	0.00	0.00
1.40	8.75	7.74	2.71	13780	0.00	0.00
1.60	9.47	16.06	4.50	12363	0.00	0.00
1.80	1.97	25.39	7.96	10605	0.00	0.00
2.00	.87	35.88	12.48	8755	0.00	0.00
2.45	1.78	60.43	11.84	4796	0.00	0.00
2.45 SINK	9.76	74.21	25.03	2426	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	53	1.47	1.77	15155	0.00	0.00
1.30	43.70	1.99	2.04	14740	0.00	0.00
1.35	67.40	3.20	2.13	14550	0.00	0.00
1.40	76.15	3.72	2.20	14462	0.00	0.00
1.60	85.63	5.09	2.45	14230	0.00	0.00
1.80	87.60	5.94	2.58	14148	0.00	0.00
2.00	88.46	5.84	2.67	14095	0.00	0.00
2.45	90.24	6.92	2.85	13912	0.00	0.00
2.45 SINK	100.00	13.48	5.02	12791	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	13.48	5.02	12791	0.00	0.00
1.30	99.47	13.55	5.04	12778	0.00	0.00
1.35	96.30	22.41	7.33	11278	0.00	0.00
1.40	92.60	34.75	10.99	9153	0.00	0.00
1.60	23.85	44.66	14.03	7455	0.00	0.00
1.80	14.37	63.51	20.30	4222	0.00	0.00
2.00	12.40	69.56	22.26	3207	0.00	0.00
2.45	11.34	72.09	22.99	2791	0.00	0.00
2.45 SINK	9.76	74.21	25.03	2426	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rye
Rocky



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693 7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE : 6-27-91
MASTER WARNER NO. 113809

C. G. F. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 9000101 TASK 2.2

MINF:

DATE SAMPLED: 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/21/91

GROSS WEIGHT: 409.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	18.18	1.26	1.58	14844	0.00		0.00
1.30	22.91	1.51	1.75	14742	0.00		0.00
1.35	17.77	3.08	1.79	14471	0.00		0.00
1.40	9.62	5.08	1.95	14151	0.00		0.00
1.60	22.01	10.24	2.36	13361	0.00		0.00
1.80	6.64	17.04	3.56	12000	0.00		0.00
2.00	2.06	32.47	6.61	8410	0.00		0.00
2.45	3.06	55.69	9.48	4316	0.00		0.00
2.45 SINK	15.74	75.03	20.10	1422	0.00		0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	18.18	1.26	1.58	14844	0.00		0.00
1.30	23.08	1.51	1.75	14743	0.00		0.00
1.35	40.86	2.19	1.77	14625	0.00		0.00
1.40	50.48	2.74	1.80	14534	0.00		0.00
1.60	72.49	5.02	1.97	14178	0.00		0.00
1.80	79.13	6.03	2.11	13995	0.00		0.00
2.00	81.19	6.70	2.22	13853	0.00		0.00
2.45	84.26	8.48	2.48	13507	0.00		0.00
2.45 SINK	100.00	18.96	5.26	11604	0.00		0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	100.00	18.96	5.26	11604	0.00		0.00
1.30	99.82	18.99	5.26	11598	0.00		0.00
1.35	76.92	24.19	6.31	10662	0.00		0.00
1.40	59.14	30.54	7.67	9517	0.00		0.00
1.60	49.52	35.49	8.78	8617	0.00		0.00
1.80	27.51	55.69	13.91	4821	0.00		0.00
2.00	20.87	67.98	17.21	2538	0.00		0.00
2.45	18.81	71.88	18.37	1893	0.00		0.00
2.45 SINK	15.74	75.03	20.10	1422	0.00		0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychert
R. Rychert



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7- 3-91
MASTER WARNER NO. 114304

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN #91013001
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

DATE SAMPLED: 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 55400.0

DATE RECEIVED: 06/26/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+100M	3.14	2.03	20.29	6.56	11921	11.00	14956
100M X 200M	39.80	1.11	13.33	4.84	13051	7.41	15058
200M X 0	57.06	1.34	15.29	5.26	12462	8.43	14711

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+100M	3.14	20.29	6.56	11921	11.00
+100M X 200M	42.94	13.84	4.97	12969	7.66
+100M X 0	100.00	14.67	5.14	12679	8.10

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+100M X 0	100.00	14.67	5.14	12679	8.10
100M X 0	96.86	14.49	5.09	12704	8.01
200M X 0	57.06	15.29	5.26	12462	8.43

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY Thomas R. Ryt

APPROVED BY Robert Ryt



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7- 3-91
 MASTER WARNER NO. 114310

C. Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN# 91013001
 SAMPLER #410001

OPERATING CO.: PROJECT # 90D0101 TASK 2.2

MINF:

SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 55400.0 GRS

DATE SAMPLED: 01/30-31/91

DATE RECEIVED: 06/26/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR COMPOSITE +100M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	97	1.94	1.73	15220	0.00	0.00
1.30	27.61	2.23	1.94	14633	0.00	0.00
1.35	23.17	4.58	2.03	14254	0.00	0.00
1.40	13.86	4.42	2.72	13816	0.00	0.00
1.60	15.97	11.80	2.95	13000	0.00	0.00
1.80	4.27	17.97	4.66	11704	0.00	0.00
2.00	1.35	31.62	8.31	9237	0.00	0.00
2.45	1.42	52.31	12.67	5755	0.00	0.00
2.45 SINK	11.37	73.50	23.20	2374	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +100M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	97	1.94	1.73	15220	0.00	0.00
1.30	28.57	2.22	1.93	14653	0.00	0.00
1.35	51.75	3.28	1.97	14474	0.00	0.00
1.40	65.61	3.94	2.13	14335	0.00	0.00
1.60	81.58	3.48	2.29	14073	0.00	0.00
1.80	85.86	6.10	2.41	13955	0.00	0.00
2.00	87.21	6.50	2.50	13882	0.00	0.00
2.45	88.63	7.23	2.67	13752	0.00	0.00
2.45 SINK	100.00	14.77	5.00	12459	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.77	5.00	12459	0.00	0.00
1.30	99.03	14.89	5.03	12432	0.00	0.00
1.35	71.43	19.78	6.23	11581	0.00	0.00
1.40	48.25	27.09	8.24	10297	0.00	0.00
1.60	34.39	35.42	10.47	8879	0.00	0.00
1.80	18.42	55.90	16.99	5305	0.00	0.00
2.00	14.14	67.37	20.72	3371	0.00	0.00
2.45	12.79	71.15	22.03	2751	0.00	0.00
2.45 SINK	11.37	73.50	23.20	2374	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ruppert
 Robert L. Lukan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-3-91
 MASTER WARNER NO. 114310

C. Q. INC.

1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN# 91013001
 SAMPLER #410001

OPERATING CO.: PROJECT # 90D0101 TASK 2.2

MINE:

DATE SAMPLED: 01/30-31/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 55400.0 GRS

DATE RECEIVED: 06/26/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR SIZE +200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.00	2.03	1.76	15286	0.00	0.00
1.30	38.04	2.08	2.11	14708	0.00	0.00
1.35	22.97	4.94	2.19	14266	0.00	0.00
1.40	10.95	9.61	2.81	13510	0.00	0.00
1.60	9.93	17.84	4.36	12113	0.00	0.00
1.80	3.49	19.68	5.61	11673	0.00	0.00
2.00	.90	32.94	10.26	9209	0.00	0.00
2.45	1.53	53.22	13.81	5920	0.00	0.00
2.45 SINK	10.17	73.04	25.87	2545	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.00	2.03	1.76	15286	0.00	0.00
1.30	40.09	2.08	2.09	14737	0.00	0.00
1.35	63.02	3.12	2.13	14565	0.00	0.00
1.40	73.97	4.08	2.23	14409	0.00	0.00
1.60	83.90	5.71	2.48	14137	0.00	0.00
1.80	87.40	6.27	2.61	14039	0.00	0.00
2.00	88.30	6.54	2.68	13989	0.00	0.00
2.45	89.83	7.34	2.87	13852	0.00	0.00
2.45 SINK	100.00	14.02	5.21	12702	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.02	5.21	12702	0.00	0.00
1.30	98.00	14.26	5.28	12649	0.00	0.00
1.35	99.93	21.99	7.30	11343	0.00	0.00
1.40	36.98	32.59	10.47	9527	0.00	0.00
1.60	26.03	42.26	13.69	7851	0.00	0.00
1.80	16.10	57.32	19.45	5222	0.00	0.00
2.00	12.60	67.76	23.29	3433	0.00	0.00
2.45	11.70	70.45	24.30	2987	0.00	0.00
2.45 SINK	10.17	73.04	25.87	2545	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rafter
 Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmonia, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7- 3-91
MASTER WARNER NO. 114310

C. G. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #2 RUN# 91013001
 SAMPLER #410001

OPERATING CO.: PROJECT # 90D0101 TASK 2.2

DATE SAMPLED: 01/30-31/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 06/26/91

GROSS WEIGHT: 55400.0 GRS

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	19	1.24	1.52	14703	0.00	0.00
1.30	19.75	2.45	1.69	14523	0.00	0.00
1.35	23.33	4.32	1.92	14245	0.00	0.00
1.40	16.05	4.78	2.68	13973	0.00	0.00
1.60	20.52	9.60	2.44	13323	0.00	0.00
1.80	4.86	17.04	4.15	11721	0.00	0.00
2.00	1.69	31.08	7.53	9248	0.00	0.00
2.45	1.34	51.52	11.69	5613	0.00	0.00
2.45 SINK	12.27	73.79	21.53	2268	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	19	1.24	1.52	14703	0.00	0.00
1.30	19.94	2.44	1.69	14525	0.00	0.00
1.35	43.27	3.45	1.81	14374	0.00	0.00
1.40	59.32	3.81	2.04	14265	0.00	0.00
1.60	79.84	5.30	2.15	14023	0.00	0.00
1.80	84.70	5.97	2.26	13891	0.00	0.00
2.00	86.39	6.46	2.36	13800	0.00	0.00
2.45	87.73	7.15	2.51	13675	0.00	0.00
2.45 SINK	100.00	15.33	4.84	12275	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	15.33	4.84	12275	0.00	0.00
1.30	99.81	15.36	4.85	12271	0.00	0.00
1.35	80.06	18.54	5.63	11715	0.00	0.00
1.40	56.73	24.39	7.15	10675	0.00	0.00
1.60	40.68	32.13	8.92	9373	0.00	0.00
1.80	20.16	55.05	15.51	5355	0.00	0.00
2.00	15.30	67.12	19.12	3332	0.00	0.00
2.45	13.61	71.60	20.56	2598	0.00	0.00
2.45 SINK	12.27	73.79	21.53	2268	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rypke
 Robert Shukla

APPENDIX A (cont.)

**Raw Coal Laboratory Analysis
of the Illinois No. 3 Seam Coal**



Goald Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

OPERATING CO: PROJECT #90D0101
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

OTHER ID: AS RECEIVED SAMPLE

DATE: 6/28/91
MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/24/91

FEED FOR COMPOSITE +3" X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.16	3.12	1.38	14551
1.30	17.15	5.08	1.83	14321
1.35	35.57	8.43	2.51	13794
1.40	16.13	12.25	3.72	13160
1.60	11.27	18.25	5.54	12081
1.80	2.69	34.83	7.05	9089
2.00	1.81	46.25	7.50	6823
2.45	4.33	69.75	6.47	2576
2.45 SINK	10.90	80.74	9.89	1189

CUMULATIVE RESULTS FOR COMPOSITE +3" X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.16	3.12	1.38	14551
1.30	17.30	5.06	1.83	14323
1.35	52.87	7.33	2.29	13967
1.40	69.00	8.48	2.62	13778
1.60	80.26	9.85	3.03	13540
1.80	82.96	10.66	3.16	13396
2.00	84.77	11.42	3.25	13255
2.45	89.10	14.26	3.41	12736
2.45 SINK	100.00	21.50	4.12	11478

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	21.50	4.12	11478
1.30	99.84	21.53	4.12	11473
1.35	82.69	24.94	4.60	10882
1.40	47.13	37.41	6.17	8684
1.60	31.00	50.49	7.45	6356
1.80	19.73	68.90	8.53	3088
2.00	17.04	74.28	8.77	2140
2.45	15.23	77.61	8.92	1584
2.45 SINK	10.90	80.74	9.89	1189

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas J. Ruff
RECEIVED



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91
 DATE RECEIVED: 6/24/91

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE +3"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	8.85	6.33	2.15	14249
1.35	42.87	9.16	2.65	13715
1.40	11.47	12.02	3.70	13241
1.60	10.97	19.31	5.64	11864
1.80	0.14	30.24	9.86	10020
2.00	1.76	44.43	14.22	7455
2.45	3.96	78.32	4.12	1702
2.45 SINK	19.99	78.70	15.29	1357

CUMULATIVE RESULTS FOR SIZE +3"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	8.85	6.33	2.15	14249
1.35	51.72	8.68	2.56	13806
1.40	63.19	9.28	2.77	13704
1.60	74.16	10.77	3.20	13432
1.80	74.30	10.80	3.21	13425
2.00	76.06	11.58	3.46	13287
2.45	80.02	14.88	3.49	12714
2.45 SINK	100.01	27.64	5.85	10444

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	27.64	5.85	10444
1.30	100.01	27.64	5.85	10444
1.35	91.16	29.71	6.21	10074
1.40	48.29	47.95	9.37	6842
1.60	36.82	59.14	11.14	4849
1.80	25.85	76.05	13.48	1872
2.00	25.71	76.30	13.50	1828
2.45	23.95	78.64	13.44	1414
2.45 SINK	19.99	78.70	15.29	1357

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas R. Rye
RECEIVED



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/24/91

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE 3" X 1 1/2"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	11.94	6.00	1.90	14099
1.35	40.16	8.44	2.55	13769
1.40	21.15	12.46	3.82	13220
1.60	9.77	18.50	5.78	12094
1.80	2.29	34.19	7.28	8984
2.00	1.26	44.66	7.64	6879
2.45	2.78	68.85	8.34	3046
2.45 SINK	10.64	77.14	16.36	1532

CUMULATIVE RESULTS FOR SIZE 3" X 1 1/2"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	11.94	6.00	1.90	14099
1.35	52.10	7.88	2.40	13845
1.40	73.25	9.20	2.81	13664
1.60	83.02	10.30	3.16	13479
1.80	85.31	10.94	3.27	13359
2.00	86.57	11.43	3.33	13264
2.45	89.35	13.22	3.49	12947
2.45 SINK	99.99	20.02	4.86	11732

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	20.02	4.86	11732
1.30	99.99	20.02	4.86	11732
1.35	88.05	21.92	5.26	11411
1.40	47.89	33.22	7.53	9434
1.60	26.74	49.64	10.47	6439
1.80	16.97	67.57	13.17	3183
2.00	14.68	72.78	14.09	2278
2.45	13.42	75.42	14.70	1846
2.45 SINK	10.64	77.14	16.36	1532

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas H. Rife
Rife



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galtzert Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

OPERATING CO: PROJECT #90D0101
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

OTHER ID: AS RECEIVED SAMPLE

DATE: 6/28/91
 MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

DATE SAMPLED: 2/1/91 & 2/4/91
 DATE RECEIVED: 6/24/91

FEED FOR SIZE 1 1/2" X 3/4"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.14	3.30	1.60	14671
1.30	13.11	5.36	1.77	14333
1.35	45.56	8.62	2.52	13793
1.40	15.17	12.86	3.85	13022
1.60	11.21	18.50	5.52	12059
1.80	2.83	39.99	7.19	8206
2.00	2.28	48.18	5.79	6416
2.45	3.87	67.75	6.38	2901
2.45 SINK	5.82	82.11	9.44	1064

CUMULATIVE RESULTS FOR SIZE 1 1/2" X 3/4"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.14	3.30	1.60	14671
1.30	13.25	5.34	1.77	14337
1.35	58.81	7.88	2.35	13915
1.40	73.98	8.90	2.66	13732
1.60	85.19	10.16	3.03	13512
1.80	88.02	11.12	3.17	13341
2.00	90.30	12.06	3.23	13167
2.45	94.17	14.35	3.36	12745
2.45 SINK	99.99	18.29	3.72	12065

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	18.29	3.72	12065
1.30	99.85	18.31	3.72	12061
1.35	86.74	20.27	4.02	11718
1.40	41.18	33.16	5.67	9422
1.60	26.01	45.00	6.73	7322
1.80	14.80	65.07	7.65	3735
2.00	11.97	71.00	7.76	2677
2.45	9.69	76.37	8.22	1798
2.45 SINK	5.82	82.11	9.44	1064

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ruff



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

OPERATING CO: PROJECT #90D0101
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

OTHER ID: AS RECEIVED SAMPLE

DATE: 6/28/91
MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/24/91

FEED FOR SIZE 3/4" X 3/8"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	14.55	5.09	1.79	14331
1.35	38.51	8.24	2.41	13807
1.40	17.49	12.35	3.63	13101
1.60	11.53	18.85	5.80	11955
1.80	2.80	36.18	7.28	8925
2.00	1.76	47.82	7.11	6520
2.45	4.26	67.63	5.79	2764
2.45 SINK	9.10	81.54	7.70	1242

CUMULATIVE RESULTS FOR SIZE 3/4" X 3/8"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	14.55	5.09	1.79	14331
1.35	53.06	7.38	2.24	13951
1.40	70.55	8.61	2.58	13740
1.60	82.08	10.05	3.04	13489
1.80	84.88	10.91	3.18	13339
2.00	86.64	11.66	3.26	13200
2.45	90.90	14.28	3.37	12711
2.45 SINK	100.00	20.40	3.77	11667

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	20.40	3.77	11667
1.30	100.00	20.40	3.77	11667
1.35	85.45	23.01	4.11	11214
1.40	46.94	35.13	5.50	9086
1.60	29.45	48.66	6.60	6702
1.80	17.92	67.83	7.12	3323
2.00	15.12	73.70	7.09	2285
2.45	13.36	77.10	7.09	1727
2.45 SINK	9.10	81.54	7.70	1242

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

James A. Ruff
R. Kelly



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/632-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91
 DATE RECEIVED: 6/24/91

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE 3/8" X 28M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	31.34	4.76	1.88	14381
1.35	17.05	8.23	2.57	13772
1.40	13.02	11.45	3.63	13261
1.60	12.15	18.41	5.86	12030
1.80	2.38	32.29	8.40	9569
2.00	1.75	46.28	9.65	7034
2.45	6.65	72.23	6.39	2018
2.45 SINK	15.67	82.48	5.23	1008

CUMULATIVE RESULTS FOR SIZE 3/8" X 28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	31.34	4.76	1.88	14381
1.35	48.39	5.98	2.12	14166
1.40	61.41	7.14	2.44	13974
1.60	73.56	9.00	3.01	13653
1.80	75.94	9.73	3.18	13525
2.00	77.69	10.56	3.32	13379
2.45	84.34	15.42	3.56	12483
2.45 SINK	100.01	25.93	3.82	10685

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	25.93	3.82	10685
1.30	100.01	25.93	3.82	10685
1.35	68.67	35.59	4.71	8999
1.40	51.62	44.62	5.42	7422
1.60	38.60	55.81	6.02	6452
1.80	26.45	72.99	6.10	2431
2.00	24.07	77.02	5.87	1725
2.45	22.32	79.43	5.58	1309
2.45 SINK	15.67	82.48	5.23	1008

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas W. Light
7/2/91



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galkitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

OPERATING CO: PROJECT #90D0101
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

OTHER ID: AS RECEIVED SAMPLE

DATE: 6/28/91
MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/24/91

FEED FOR SIZE 28 X 100

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	5.41	3.09	1.31	14511
1.30	35.17	3.14	1.51	14476
1.35	14.20	6.98	2.46	13921
1.40	7.67	10.70	3.39	13268
1.60	9.39	17.11	3.29	12180
1.80	2.61	26.95	4.94	10501
2.00	1.99	39.99	7.59	8183
2.45	4.11	63.80	8.19	3886
2.45 SINK	19.44	81.23	8.47	561

CUMULATIVE RESULTS FOR SIZE 28 X 100

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	5.41	3.09	1.31	14511
1.30	40.58	3.13	1.48	14481
1.35	54.78	4.13	1.74	14336
1.40	62.45	4.94	1.94	14204
1.60	71.84	6.53	2.12	13940
1.80	74.45	7.24	2.22	13819
2.00	76.44	8.10	2.36	13673
2.45	80.55	10.94	2.65	13173
2.45 SINK	99.99	24.60	3.78	10721

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	24.60	3.78	10721
1.30	94.58	25.84	3.93	10504
1.35	59.41	39.27	5.36	8153
1.40	45.21	49.41	6.26	6342
1.60	37.54	57.32	6.85	4926
1.80	28.15	70.74	8.04	2507
2.00	25.54	75.21	8.36	1690
2.45	23.55	78.19	8.42	1141
2.45 SINK	19.44	81.23	8.47	561

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
Park



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Golfitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

OPERATING CO: PROJECT #90D0101
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

OTHER ID: AS RECEIVED SAMPLE

DATE: 6/28/91
MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/24/91

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.28	1.26	1.13	14824
1.30	16.76	3.53	1.60	14359
1.35	16.82	3.66	1.58	14413
1.40	19.36	6.73	2.03	14033
1.60	12.08	9.62	2.36	13510
1.80	4.66	14.17	3.16	12643
2.00	1.72	29.97	5.63	9912
2.45	2.82	62.10	8.86	4441
2.45 SINK	25.51	81.81	13.47	1075

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.28	1.26	1.13	14824
1.30	17.04	3.49	1.59	14367
1.35	33.86	3.58	1.59	14390
1.40	53.22	4.72	1.75	14260
1.60	65.30	5.63	1.86	14121
1.80	69.96	6.20	1.95	14023
2.00	71.68	6.77	2.04	13924
2.45	74.50	8.86	2.29	13565
2.45 SINK	100.01	27.47	5.14	10379

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	27.47	5.14	10379
1.30	99.73	27.54	5.16	10367
1.35	82.97	32.39	5.87	9560
1.40	66.15	39.70	6.97	8326
1.60	46.79	53.34	9.01	5965
1.80	34.71	68.56	11.32	3339
2.00	30.05	76.99	12.59	1897
2.45	28.33	79.85	13.01	1410
2.45 SINK	25.51	81.81	13.47	1075

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
REK



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91
 DATE RECEIVED: 6/24/91

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	6.57	1.93	1.15	14649
1.35	9.99	3.16	1.28	14423
1.40	6.54	4.48	1.10	14359
1.60	24.05	7.67	1.00	13872
1.80	20.52	25.63	3.56	10818
2.00	3.25	24.79	2.79	10456
2.45	6.93	73.52	10.29	2364
2.45 SINK	22.15	82.49	11.07	1196

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	6.57	1.93	1.15	14649
1.35	16.56	2.67	1.23	14513
1.40	23.10	3.18	1.19	14469
1.60	47.15	5.47	1.09	14165
1.80	67.67	11.58	1.84	13150
2.00	70.92	12.19	1.89	13026
2.45	77.85	17.65	2.63	12077
2.45 SINK	100.00	32.01	4.50	9667

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	32.01	4.50	9667
1.30	100.00	32.01	4.50	9667
1.35	93.43	34.13	4.74	9317
1.40	83.44	37.83	5.15	8705
1.60	76.90	40.67	5.50	8224
1.80	52.85	55.69	7.54	5655
2.00	32.33	74.77	10.07	2377
2.45	29.08	80.35	10.88	1474
2.45 SINK	22.15	82.49	11.07	1196

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Thomas A. Rife
REK



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/866-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.

DATE: 6/27/91

MASTER WARNER NO.

114041

1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003

SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED: 2/1/91 & 2/4/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT:

DATE RECEIVED: 6/24/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2"

CERTIFICATE OF ANALYSIS

SCREEN SIZE OR GRAVITY	WEIGHT %	% ASH	% SULFUR	BTU
+ 1 1/2"	3.72	25.35	9.34	10710
1 1/2" X 3/4"	30.49	18.39	4.82	12124
3/4" X 3/8"	24.58	18.73	4.28	12074
3/8" X 28 MESH	32.81	22.65	4.08	11250
28M X 100M	5.06	23.24	4.23	11151
100M X 200M	1.48	27.33	5.06	10592
200M X 0	1.86	31.61	5.12	9401

CUMULATIVE RETAINED - DOWN

SCREEN SIZE OR GRAVITY	% WEIGHT	ASH	SULFUR	BTU
+ 1 1/2"	3.72	25.35	9.34	10710
1 1/2" X 3/4"	34.21	19.15	5.31	11970
3/4" X 3/8"	58.79	18.97	4.88	12014
3/8" X 28 MESH	91.60	20.29	4.59	11740
28M X 100M	96.66	20.44	4.57	11709
100M X 200M	98.14	20.55	4.58	11692
200M X 0	100.00	20.75	4.59	11650

CUMULATIVE RETAINED - UP

SCREEN SIZE OR GRAVITY	% WEIGHT	ASH	SULFUR	BTU
+ 1 1/2"	100.00	20.75	4.59	11650
1 1/2" X 3/4"	96.28	20.58	4.41	11686
3/4" X 3/8"	65.79	21.59	4.22	11483
3/8" X 28 MESH	41.21	23.29	4.18	11131
28M X 100M	8.40	25.81	4.57	10665
100M X 200M	3.34	29.71	5.09	9929
200M X 0	1.86	31.61	5.12	9401



ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rife
Robert Shuman



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114041

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/24/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR COMPOSITE +1 1/2" X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	1.21	2.63	1.38	14612
1.30	18.68	4.89	1.80	14340
1.35	32.37	8.16	2.49	13834
1.40	16.46	12.06	3.54	13193
1.60	11.50	18.97	5.66	11979
1.80	2.31	29.96	6.94	9987
2.00	1.72	45.17	8.15	7223
2.45	3.27	64.67	7.60	3578
2.45 SINK	12.47	78.72	12.97	1242

CUMULATIVE RESULTS FOR COMPOSITE +1 1/2" X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	1.21	2.63	1.38	14612
1.30	19.89	4.75	1.77	14356
1.35	52.26	6.86	2.22	14033
1.40	68.72	8.11	2.53	13832
1.60	80.23	9.67	2.98	13566
1.80	82.54	10.23	3.09	13466
2.00	84.26	10.95	3.20	13338
2.45	87.53	12.95	3.36	12974
2.45 SINK	100.00	21.16	4.56	11511

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	21.16	4.56	11511
1.30	98.79	21.38	4.60	11473
1.35	80.11	25.23	5.25	10804
1.40	47.74	36.80	7.12	8750
1.60	31.28	49.83	9.01	6411
1.80	19.77	67.78	10.96	3171
2.00	17.46	72.79	11.49	2268
2.45	15.74	75.80	11.85	1727
2.45 SINK	12.47	78.72	12.97	1242

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ruff
Robert Shahan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114041

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/24/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE +1 1/2"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	9.79	5.96	1.89	14243
1.35	32.10	8.22	2.60	13832
1.40	20.21	11.94	3.31	13243
1.60	11.30	21.79	4.59	11579
1.80	1.28	42.38	5.93	8052
2.00	2.32	48.06	4.44	6066
2.45	0.20	63.25	5.88	3678
2.45 SINK	22.80	69.07	27.30	2416

CUMULATIVE RESULTS FOR SIZE +1 1/2"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	9.79	5.96	1.89	14243
1.35	41.89	7.69	2.43	13928
1.40	62.10	9.07	2.72	13705
1.60	73.40	11.03	3.01	13378
1.80	74.68	11.57	3.06	13287
2.00	77.00	12.67	3.10	13069
2.45	77.20	12.80	3.11	13045
2.45 SINK	100.00	25.63	8.62	10621

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	25.63	8.62	10621
1.30	100.00	25.63	8.62	10621
1.35	90.21	27.76	9.35	10228
1.40	58.11	38.56	13.08	8238
1.60	37.90	52.76	18.29	5568
1.80	26.60	65.91	24.12	3015
2.00	25.32	67.10	25.04	2760
2.45	23.00	69.02	27.11	2427
2.45 SINK	22.80	69.07	27.30	2416

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Righetti
Robert Shuckan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114041

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/24/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0 RAW

FEED FOR SIZE 1 1/2" X 3/4"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	19.02	5.82	1.92	14284
1.35	35.05	8.64	2.56	13776
1.40	19.27	12.43	3.49	13160
1.60	11.43	19.03	5.95	12030
1.80	1.93	34.40	7.14	9366
2.00	1.54	48.24	6.60	6848
2.45	3.28	65.52	7.19	3424
2.45 SINK	8.47	74.47	21.20	1656

CUMULATIVE RESULTS FOR SIZE 1 1/2" X 3/4"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	19.02	5.82	1.92	14284
1.35	54.07	7.65	2.33	13955
1.40	73.34	8.90	2.64	13746
1.60	84.77	10.27	3.08	13515
1.80	86.70	10.81	3.18	13422
2.00	88.24	11.46	3.23	13307
2.45	91.52	13.40	3.38	12953
2.45 SINK	99.99	18.57	4.89	11996

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	18.57	4.89	11996
1.30	99.99	18.57	4.89	11996
1.35	80.97	21.57	5.58	11459
1.40	45.92	31.43	7.89	9690
1.60	26.65	45.17	11.07	7181
1.80	15.22	64.81	14.92	3540
2.00	13.29	69.22	16.05	2694
2.45	11.75	71.97	17.29	2150
2.45 SINK	8.47	74.47	21.20	1656

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ripton
Robert L. Ripton



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/686-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114041

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/24/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 3/4" X 3/8"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	18.31	5.06	1.82	14345
1.35	35.34	8.29	2.55	13832
1.40	20.08	12.28	3.78	13160
1.60	10.79	19.64	6.30	11895
1.80	1.87	36.36	7.87	8890
2.00	1.85	50.87	9.70	6303
2.45	3.12	66.79	6.66	3474
2.45 SINK	8.65	79.87	12.50	1136

CUMULATIVE RESULTS FOR SIZE 3/4" X 3/8"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	18.31	5.06	1.82	14345
1.35	53.65	7.19	2.30	14007
1.40	73.73	8.57	2.70	13776
1.60	84.52	9.99	3.16	13536
1.80	86.39	10.56	3.26	13436
2.00	88.24	11.40	3.40	13286
2.45	91.36	13.29	3.51	12951
2.45 SINK	100.01	19.05	4.29	11929

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	19.05	4.29	11929
1.30	100.01	19.05	4.29	11929
1.35	81.70	22.19	4.84	11388
1.40	46.36	32.78	6.59	9524
1.60	26.28	48.45	8.73	6746
1.80	15.49	68.52	10.43	3160
2.00	13.62	72.93	10.78	2373
2.45	11.77	76.40	10.95	1756
2.45 SINK	8.65	79.87	12.50	1136

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
Robert L. Luchan



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/686-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 6/28/91

MASTER WARNER NO. 114041

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

DATE RECEIVED: 6/24/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEEED FOR SIZE 3/8" X 28 MESH

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.09	4.02	1.66	14411
1.30	19.72	4.25	1.71	14368
1.35	32.57	7.76	2.39	13874
1.40	13.19	11.81	3.51	13202
1.60	11.61	20.22	5.88	11726
1.80	2.25	30.92	8.68	9754
2.00	1.47	43.08	10.12	7543
2.45	3.51	62.27	7.90	3763
2.45 SINK	15.59	80.95	7.30	975

CUMULATIVE RESULTS FOR SIZE 3/8" X 28 MESH

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.09	4.02	1.66	14411
1.30	19.81	4.25	1.71	14368
1.35	52.38	6.43	2.13	14061
1.40	65.57	7.51	2.41	13888
1.60	77.18	9.43	2.93	13563
1.80	79.43	10.03	3.09	13455
2.00	80.90	10.63	3.22	13348
2.45	84.41	12.78	3.42	12949
2.45 SINK	100.00	23.41	4.02	11082

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	23.41	4.02	11082
1.30	99.91	23.43	4.02	11079
1.35	80.19	28.14	4.59	10271
1.40	47.62	42.08	6.10	7806
1.60	34.43	53.68	7.09	5739
1.80	22.82	70.70	7.71	2693
2.00	20.57	75.06	7.60	1920
2.45	19.10	77.52	7.41	1487
2.45 SINK	15.59	80.95	7.30	975

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Reft
Robert Shuchan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C. Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114041
 SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91
 DATE RECEIVED: 6/24/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE		28 X 100		
GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	23.15	2.60	1.37	14618
1.30	20.94	3.94	1.75	14431
1.35	15.29	7.54	2.50	13875
1.40	5.35	11.90	3.47	13184
1.60	9.16	17.17	4.85	12193
1.80	2.58	28.80	6.80	10153
2.00	1.82	41.22	8.37	8047
2.45	3.27	61.52	9.36	4273
2.45 SINK	18.45	81.41	9.33	891

CUMULATIVE RESULTS FOR SIZE 28 X 100

CUMULATIVE DOWN				
GRAVITY	% WT	% ASH	% S	BTU
1.25	23.15	2.60	1.37	14618
1.30	44.09	3.24	1.55	14529
1.35	59.38	4.34	1.79	14361
1.40	64.73	4.97	1.93	14263
1.60	73.89	6.48	2.29	14007
1.80	76.47	7.23	2.45	13877
2.00	78.29	8.02	2.58	13741
2.45	81.56	10.17	2.86	13362
2.45 SINK	100.01	23.31	4.05	11061

CUMULATIVE UP				
GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	23.31	4.05	11061
1.30	76.86	29.55	4.86	9990
1.35	55.92	39.14	6.02	8327
1.40	40.63	51.03	7.35	6239
1.60	35.28	56.97	7.94	5185
1.80	26.12	70.92	9.02	2728
2.00	23.54	75.54	9.26	1914
2.45	21.72	78.42	9.33	1400
2.45 SINK	18.45	81.41	9.33	891

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rycht
 Robert Shelton



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Germania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114041

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
 SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/24/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.36	1.64	1.23	14370
1.30	23.14	2.25	1.50	14362
1.35	14.56	3.07	1.55	14348
1.40	10.84	5.70	1.99	14056
1.60	16.13	9.87	2.48	13437
1.80	4.60	15.85	3.66	12187
2.00	1.50	34.86	6.93	8836
2.45	2.92	62.85	8.85	4281
2.45 SINK	25.95	81.58	14.35	1103

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.36	1.64	1.23	14370
1.30	23.50	2.24	1.50	14362
1.35	38.06	2.56	1.52	14357
1.40	48.90	3.25	1.62	14290
1.60	65.03	4.90	1.83	14078
1.80	69.63	5.62	1.96	13954
2.00	71.13	6.24	2.06	13846
2.45	74.05	8.47	2.33	13468
2.45 SINK	100.00	27.44	5.45	10260

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	27.44	5.45	10260
1.30	99.64	27.53	5.46	10245
1.35	76.50	35.18	6.66	8999
1.40	61.94	42.73	7.86	7742
1.60	51.10	50.59	9.11	6403
1.80	34.97	69.37	12.17	3158
2.00	30.37	77.47	13.45	1790
2.45	28.87	79.69	13.79	1424
2.45 SINK	25.95	81.58	14.35	1103

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Righter
 Robert Shuhan



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmonia, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/632-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114041

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/24/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	7.88	1.84	1.19	14653
1.35	6.82	3.13	1.40	14396
1.40	7.70	4.42	1.25	14253
1.60	23.35	7.52	1.19	13669
1.80	15.09	9.50	1.45	13413
2.00	6.00	21.20	2.71	11062
2.45	7.28	71.19	10.92	2646
2.45 SINK	25.88	82.30	11.92	1047

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	7.88	1.84	1.19	14653
1.35	14.70	2.44	1.29	14534
1.40	22.40	3.12	1.27	14437
1.60	45.75	5.37	1.23	14045
1.80	60.84	6.39	1.29	13888
2.00	66.84	7.72	1.41	13635
2.45	74.12	13.95	2.35	12555
2.45 SINK	100.00	31.64	4.82	9577

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	31.64	4.82	9577
1.30	100.00	31.64	4.82	9577
1.35	92.12	34.19	5.14	9143
1.40	85.30	36.67	5.43	8723
1.60	77.60	39.88	5.85	8174
1.80	54.25	53.80	7.85	5809
2.00	39.16	70.87	10.32	2879
2.45	33.16	79.86	11.70	1398
2.45 SINK	25.88	82.30	11.92	1047

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL

Thomas A. Right
Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/27/91
MASTER WARNER NO. 114174

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED: 2/1/91 & 2/4/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT:

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE OR GRAVITY	WEIGHT %	% ASH	% SULFUR	BTU
+3/4"	3.59	32.73	4.85	9716
3/4" X 3/8"	38.75	19.58	4.52	11891
3/8" X 28 MESH	48.71	21.07	4.25	11339
28M X 100M	5.26	21.38	4.48	11341
100M X 200M	1.37	25.35	5.43	10758
200M X 0	2.32	29.69	5.41	9953

CUMULATIVE RETAINED - DOWN

SCREEN SIZE OR GRAVITY	% WEIGHT	ASH	SULFUR	BTU
+3/4"	3.59	32.73	4.85	9716
3/4" X 3/8"	42.34	20.69	4.55	11707
3/8" X 28 MESH	91.05	20.90	4.39	11510
28M X 100M	96.31	20.92	4.39	11501
100M X 200M	97.68	20.98	4.41	11490
200M X 0	100.00	21.19	4.43	11455

CUMULATIVE RETAINED - UP

SCREEN SIZE OR GRAVITY	% WEIGHT	ASH	SULFUR	BTU
+3/4"	100.00	21.19	4.43	11455
3/4" X 3/8"	96.41	20.76	4.42	11519
3/8" X 28 MESH	57.66	21.55	4.35	11270
28M X 100M	8.95	24.14	4.87	10892
100M X 200M	3.69	28.08	5.42	10252
200M X 0	2.32	29.69	5.41	9953

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ruff
Robert Melhan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galtztein Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114174

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR COMPOSITE +3/4" X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.66	1.87	1.27	14722
1.30	20.78	4.49	1.73	14420
1.35	30.39	8.03	2.37	13817
1.40	16.26	11.93	3.46	13206
1.60	12.44	18.78	4.95	11994
1.80	2.38	31.39	7.13	9769
2.00	1.29	44.47	8.37	7329
2.45	3.10	65.43	7.27	3401
2.45 SINK	12.70	78.40	11.62	1052

CUMULATIVE RESULTS FOR COMPOSITE +3/4" X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.66	1.87	1.27	14722
1.30	21.44	4.41	1.72	14429
1.35	51.84	6.53	2.10	14070
1.40	68.09	7.82	2.42	13864
1.60	80.53	9.51	2.81	13575
1.80	82.91	10.14	2.94	13466
2.00	84.21	10.67	3.02	13372
2.45	87.30	12.61	3.17	13018
2.45 SINK	100.00	20.97	4.25	11498

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	20.97	4.25	11498
1.30	99.34	21.09	4.26	11477
1.35	78.56	25.49	4.94	10698
1.40	48.16	36.50	6.55	8730
1.60	31.91	49.02	8.13	6450
1.80	19.47	68.34	10.16	2908
2.00	17.09	73.48	10.59	1953
2.45	15.80	75.86	10.77	1512
2.45 SINK	12.70	78.40	11.62	1052

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychter
 Robert M. Heston



Goald Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114174

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE +3/4"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	10.42	5.96	1.92	14273
1.35	27.02	8.40	2.37	13826
1.40	14.94	13.46	3.40	13010
1.60	12.58	23.01	4.22	11387
1.80	4.36	38.73	3.96	8757
2.00	3.19	53.52	4.33	6065
2.45	5.49	71.83	5.06	2721
2.45 SINK	22.00	80.42	10.47	1076

CUMULATIVE RESULTS FOR SIZE +3/4"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	10.42	5.96	1.92	14273
1.35	37.44	7.72	2.24	13950
1.40	52.38	9.36	2.57	13682
1.60	64.96	12.00	2.89	13238
1.80	69.32	13.68	2.96	12956
2.00	72.51	15.44	3.02	12653
2.45	78.00	19.40	3.16	11954
2.45 SINK	100.00	32.83	4.77	9561

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	32.83	4.77	9561
1.30	100.00	32.83	4.77	9561
1.35	89.58	35.95	5.10	9012
1.40	62.56	47.85	6.28	6933
1.60	47.62	58.64	7.19	5027
1.80	35.04	71.44	8.25	2744
2.00	30.68	76.09	8.86	1889
2.45	27.49	78.70	9.39	1405
2.45 SINK	22.00	80.42	10.47	1076

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ruffin
Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 96, Garmann, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114174

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90DQ101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
 SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/25/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 3/4" X 3/8"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	16.84	5.28	1.80	14280
1.35	32.84	8.18	2.36	13769
1.40	19.82	11.79	3.36	13237
1.60	14.62	19.41	4.55	11933
1.80	1.81	37.44	7.15	8753
2.00	1.18	47.91	8.07	6754
2.45	2.85	64.13	6.53	3538
2.45 SINK	10.03	76.87	15.74	1293

CUMULATIVE RESULTS FOR SIZE 3/4" X 3/8"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	16.84	5.28	1.80	14280
1.35	49.68	7.20	2.17	13942
1.40	69.50	8.51	2.51	13741
1.60	84.12	10.40	2.86	13427
1.80	85.93	10.97	2.95	13328
2.00	87.11	11.47	3.02	13239
2.45	89.96	13.14	3.13	12932
2.45 SINK	99.99	19.53	4.40	11764

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	19.53	4.40	11764
1.30	99.99	19.53	4.40	11764
1.35	83.15	22.42	4.93	11255
1.40	50.31	31.71	6.60	9614
1.60	30.49	44.67	8.71	7259
1.80	15.87	67.93	12.54	2953
2.00	14.06	71.86	13.23	2206
2.45	12.88	74.05	13.70	1790
2.45 SINK	10.03	76.87	15.74	1293

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/866-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O. INC.

1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91

MASTER WARNER NO. 114174

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/25/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 3/8" X 28 MESH

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	23.55	4.26	1.72	14476
1.35	32.01	8.01	2.40	13840
1.40	15.05	12.28	3.66	13151
1.60	10.12	19.64	6.06	11800
1.80	2.32	30.98	8.59	9818
2.00	1.08	44.98	10.49	7200
2.45	2.81	64.79	7.54	3479
2.45 SINK	13.07	78.53	8.95	934

CUMULATIVE RESULTS FOR SIZE 3/8" X 28 MESH

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	23.55	4.26	1.72	14476
1.35	55.56	6.42	2.11	14110
1.40	70.61	7.67	2.44	13905
1.60	80.73	9.17	2.90	13641
1.80	83.05	9.78	3.05	13535
2.00	84.13	10.23	3.15	13453
2.45	86.94	11.99	3.29	13131
2.45 SINK	100.01	20.69	4.03	11537

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	20.69	4.03	11537
1.30	100.01	20.69	4.03	11537
1.35	76.46	25.75	4.74	10632
1.40	44.45	38.53	6.43	8321
1.60	29.40	51.96	7.85	5849
1.80	19.28	68.93	8.79	2725
2.00	16.96	74.12	8.81	1755
2.45	15.88	76.10	8.70	1384
2.45 SINK	13.07	78.53	8.95	934

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUB-
 MITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION
 OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RE-
 SERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychtman
Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galkitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 6/28/91

MASTER WARNER NO. 114174

C.Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE: CUSTOMER PROVIDED

DATE RECEIVED: 6/25/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 28 X 100

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	11.03	1.87	1.27	14715
1.30	34.47	3.51	1.65	14519
1.35	13.51	7.67	2.48	13804
1.40	7.52	11.15	3.33	13190
1.60	10.47	17.42	4.86	12095
1.80	2.77	28.50	7.03	10249
2.00	1.42	41.76	9.33	7809
2.45	3.60	65.31	8.11	3362
2.45 SINK	15.22	79.88	11.98	621

CUMULATIVE RESULTS FOR SIZE 28 X 100

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	11.03	1.87	1.27	14715
1.30	45.50	3.11	1.56	14567
1.35	59.01	4.16	1.77	14392
1.40	66.53	4.95	1.95	14256
1.60	77.00	6.64	2.34	13962
1.80	79.77	7.40	2.50	13833
2.00	81.19	8.00	2.62	13728
2.45	84.79	10.44	2.86	13288
2.45 SINK	100.01	21.00	4.25	11360

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.01	21.00	4.25	11360
1.30	88.98	23.38	4.61	10944
1.35	54.51	35.94	6.49	8684
1.40	41.00	45.25	7.81	6997
1.60	33.48	52.91	8.82	5605
1.80	23.01	69.06	10.62	2652
2.00	20.24	74.61	11.11	1613
2.45	18.82	77.09	11.24	1145
2.45 SINK	15.22	79.88	11.98	621

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
 Robert Sheehan



Goald Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114174

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/28/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	5.86	1.87	1.25	14773
1.30	27.76	2.37	1.26	14643
1.35	11.76	4.17	1.79	14336
1.40	7.57	6.82	2.27	13916
1.60	13.56	11.39	3.07	13139
1.80	5.45	15.71	4.01	12396
2.00	1.62	31.04	6.68	9662
2.45	3.88	67.81	7.29	3642
2.45 SINK	22.53	80.48	14.14	1256

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	5.86	1.87	1.25	14773
1.30	33.62	2.28	1.26	14666
1.35	45.38	2.77	1.40	14580
1.40	52.95	3.35	1.52	14485
1.60	66.51	4.99	1.84	14211
1.80	71.96	5.80	2.00	14073
2.00	73.58	6.36	2.10	13976
2.45	77.46	9.44	2.36	13459
2.45 SINK	99.99	25.44	5.02	10709

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	99.99	25.44	5.02	10709
1.30	94.13	26.91	5.25	10456
1.35	66.37	37.18	6.92	8705
1.40	54.61	44.28	8.03	7492
1.60	47.04	50.31	8.95	6458
1.80	33.48	66.08	11.34	3753
2.00	28.03	75.87	12.76	2072
2.45	26.41	78.62	13.13	1607
2.45 SINK	22.53	80.48	14.14	1256

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114174

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE SAMPLED: 2/1/91 & 2/4/91

GROSS WEIGHT:

DATE RECEIVED: 6/28/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	9.44	1.83	1.19	14742
1.35	10.10	2.86	1.38	14485
1.40	8.99	4.51	1.35	14204
1.60	28.33	7.31	1.25	13978
1.80	7.39	11.99	1.79	12976
2.00	4.27	20.44	2.83	11242
2.45	7.88	70.55	11.22	2686
2.45 SINK	23.60	81.46	13.17	1186

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	9.44	1.83	1.19	14742
1.35	19.54	2.36	1.29	14609
1.40	28.53	3.04	1.31	14481
1.60	56.86	5.17	1.28	14231
1.80	64.25	5.95	1.34	14086
2.00	68.52	6.85	1.43	13909
2.45	76.40	13.42	2.44	12752
2.45 SINK	100.00	29.48	4.97	10022

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	29.48	4.97	10022
1.30	100.00	29.48	4.97	10022
1.35	90.56	32.36	5.37	9530
1.40	80.46	36.07	5.87	8908
1.60	71.47	40.04	6.44	8242
1.80	43.14	61.53	9.84	4475
2.00	35.75	71.77	11.51	2718
2.45	31.48	78.73	12.68	1561
2.45 SINK	23.60	81.46	13.17	1186

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/866-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7- 9-91
WARNER NO. 115034

C. Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.:
SAMPLED BY: CUSTOMER PROVIDED
MINE:
LOCATION:

DATE SAMPLED: 02/01-04/91
WEATHER:
GROSS WEIGHT: 1307.3 KG

DATE RECEIVED: 070191

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

CERTIFICATE OF ANALYSIS

	ASTM METHOD	AS RECEIVED	DRY BASIS
MOISTURE	D2961 D3302 D3173	7.86%	XXX
VOLATILE MATTER	D3175	30.16%	32.73%
FIXED CARBON	D3172	42.88%	46.54%
ASH	D3174	19.10%	20.73%
SULFUR	D4239 METHOD 3.3	3.92%	4.25%
CARBON	D3178	59.65%	64.75%
HYDROGEN	D3178	4.24%	4.61%
NITROGEN	D3179	1.08%	1.17%
OXYGEN	D3176	4.15%	4.50%
BTU/LB	D2015	10684	11596
MAF BTU/LB			14628
LBS OF SO2 PER MILLION BTU			7.32
HARDGROVE GRINDABILITY INDEX		56	
	D409		
FORMS OF SULFUR	D2492		
PYRITIC SULFUR		2.51%	2.73%
SULFATE SULFUR		.14%	.15%
ORGANIC SULFUR		1.27%	1.37%
CHLORINE	D4208	.34%	.36%
EQUILIBRIUM MOISTURE	D1412	3.16%	
PAGE 1 OF 2			

BLACK SEAL ANALYSIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
Rocky



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7- 9-91
WARNER NO. 115036

CERTIFICATE OF ANALYSIS (CONT.)

AS RECEIVED DRY BASIS

ASH FUSION TEMPERATURE(S)
D1857 - ELECTRIC METHOD REDUCING ATMOSPHERE

INITIAL DEFORMATION TEMPERATURE	2015
SOFTENING TEMPERATURE	2030
HEMISPHERICAL TEMPERATURE	2100
FLUID TEMPERATURE	2240

D1857

OXIDIZING ATMOSPHERE

INITIAL DEFORMATION TEMPERATURE	2435
SOFTENING TEMPERATURE	2480
HEMISPHERICAL TEMPERATURE	2515
FLUID TEMPERATURE	2555

ASH MINERAL COMPOSITION
D2795 D3682

SILICON DIOXIDE	44.78
ALUMINIUM OXIDE	20.20
FERRIC OXIDE	23.53
TITANIUM DIOXIDE	.97
PHOSPHORUS PENTOXIDE	.40
CALCIUM OXIDE	4.61
MAGNESIUM OXIDE	1.39
SODIUM OXIDE	.31
POTASSIUM OXIDE	2.05
SULFUR TRIOXIDE	2.65
PERCENT SOLIDS	92.14%

Lithium Oxide 107.6

Manganese Dioxide 712.1 ppm

APPROVED BY

Thomas A. Rapt

APPROVED BY

Rackly

PAGE 2 OF 2



BLACK SEAL ANALYSIS

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Goald Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/27/91
MASTER WARNER NO. 114175

SAMPLE ID: ILLINOIS #3 RUN #91013003 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WEIGHT %	% ASH	% SULFUR	BTU
+3/8"	3.04	29.39	3.67	10272
3/8" X 28 MESH	83.30	19.96	4.03	11784
28 X 100M	8.68	19.16	4.14	11895
100 X 200M	1.72	21.13	5.03	11481
200M X 0	3.26	28.64	4.76	10122

CUMULATIVE DOWN

SCREEN SIZES	% WEIGHT	ASH	SULFUR	BTU
+3/8"	3.04	29.39	3.67	10272
3/8" X 28 MESH	86.34	20.29	4.02	11731
28 X 100M	95.02	20.19	4.03	11746
100 X 200M	96.74	20.21	4.05	11741
200M X 0	100.00	20.48	4.07	11688

CUMULATIVE UP

SCREEN SIZES	% WEIGHT	ASH	SULFUR	BTU
+3/8"	100.00	20.48	4.07	11688
3/8" X 28 MESH	96.96	20.20	4.08	11733
28 X 100M	13.66	21.67	4.40	11420
100 X 200M	4.98	26.05	4.85	10591
200M X 0	3.26	28.64	4.76	10122

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychter
Rocky



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114175

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE: CUSTOMER PROVIDED

SAMPLED BY:

DATE RECEIVED: 6/25/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEE FOR COMPOSITE +3/8" X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	1.93	2.05	1.34	14767
1.30	19.46	4.32	1.73	14411
1.35	29.95	7.62	2.32	13922
1.40	16.16	11.72	3.30	13202
1.60	13.16	17.80	5.06	12164
1.80	2.83	29.05	6.97	10123
2.00	1.26	44.50	8.66	7259
2.45	3.16	67.58	6.86	3059
2.45 SINK	12.10	78.58	10.59	1177

CUMULATIVE RESULTS FOR COMPOSITE +3/8" X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	1.93	2.05	1.34	14767
1.30	21.38	4.12	1.69	14443
1.35	51.34	6.16	2.06	14139
1.40	67.50	7.49	2.36	13915
1.60	80.65	9.17	2.80	13629
1.80	83.48	9.85	2.94	13510
2.00	84.74	10.36	3.02	13417
2.45	87.90	12.42	3.16	13045
2.45 SINK	100.00	20.42	4.06	11609

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	20.42	4.06	11609
1.30	98.07	20.78	4.11	11547
1.35	78.61	24.86	4.70	10838
1.40	48.66	35.47	6.17	8940
1.60	32.50	47.28	7.60	6821
1.80	19.35	67.32	9.33	3188
2.00	16.52	73.87	9.73	2002
2.45	15.26	76.30	9.82	1567
2.45 SINK	12.10	78.58	10.59	1177

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychter
Rocky



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

OPERATING CO: PROJECT #90D0101 TASK 2.2
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

DATE: 6/28/91
MASTER WARNER NO. 114175

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE +3/8"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	11.96	5.36	1.88	14227
1.35	27.08	8.20	2.40	13833
1.40	16.29	12.02	3.33	13170
1.60	13.95	20.21	4.88	11852
1.80	3.23	39.00	5.58	8656
2.00	2.85	53.76	4.15	6020
2.45	9.67	73.69	4.01	2103
2.45 SINK	14.97	82.83	5.72	668

CUMULATIVE RESULTS FOR SIZE +3/8"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	11.96	5.36	1.88	14227
1.35	39.04	7.33	2.24	13954
1.40	55.33	8.71	2.56	13723
1.60	69.28	11.03	3.03	13346
1.80	72.51	12.27	3.14	13137
2.00	75.36	13.84	3.18	12868
2.45	85.03	20.65	3.27	11644
2.45 SINK	100.00	29.96	3.64	10001

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	29.96	3.64	10001
1.30	100.00	29.96	3.64	10001
1.35	88.04	33.30	3.88	9427
1.40	60.96	44.45	4.54	7469
1.60	44.67	56.27	4.98	5390
1.80	30.72	72.65	5.02	2456
2.00	27.49	76.60	4.96	1728
2.45	24.64	79.24	5.05	1231
2.45 SINK	14.97	82.83	5.72	668

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
ROCK



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

DATE: 6/28/91
 MASTER WARNER NO. 114175

OPERATING CO: PROJECT #90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 3/8" X 28M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	19.61	4.50	1.75	14394
1.35	32.47	7.73	2.34	13910
1.40	17.05	11.93	3.34	13177
1.60	12.98	18.65	5.43	12031
1.80	2.60	31.08	7.78	9797
2.00	1.14	45.04	9.45	7171
2.45	2.87	67.02	6.59	3106
2.45 SINK	11.28	78.06	10.49	1206

CUMULATIVE RESULTS FOR SIZE 3/8" X 28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	19.61	4.50	1.75	14394
1.35	52.08	6.51	2.12	14092
1.40	69.13	7.85	2.42	13867
1.60	82.11	9.56	2.90	13576
1.80	84.71	10.22	3.05	13460
2.00	85.85	10.68	3.13	13377
2.45	88.72	12.50	3.24	13045
2.45 SINK	100.00	19.90	4.06	11709

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	19.90	4.06	11709
1.30	100.00	19.90	4.06	11709
1.35	80.39	23.65	4.62	11054
1.40	47.92	34.44	6.17	9119
1.60	30.87	46.88	7.73	6878
1.80	17.89	67.36	9.40	3139
2.00	15.29	73.53	9.68	2007
2.45	14.15	75.82	9.70	1591
2.45 SINK	11.28	78.06	10.49	1206

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Light
Rocky



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114175

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED: 2/1/91 & 2/4/91

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/25/91

GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	21.28	2.05	1.34	14768
1.30	22.64	3.54	1.70	14457
1.35	16.48	7.12	2.39	13933
1.40	11.74	11.48	3.43	13170
1.60	8.23	18.86	5.12	11920
1.80	2.15	30.22	7.48	9955
2.00	1.39	43.33	8.85	7570
2.45	2.62	63.00	8.86	4050
2.45 SINK	13.47	78.53	11.79	1094

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	21.28	2.05	1.34	14768
1.30	43.92	2.82	1.53	14608
1.35	60.40	3.99	1.76	14424
1.40	72.14	5.21	2.03	14220
1.60	80.37	6.61	2.35	13984
1.80	82.52	7.22	2.48	13879
2.00	83.91	7.82	2.59	13775
2.45	86.53	9.49	2.78	13480
2.45 SINK	100.00	18.79	3.99	11812

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	18.79	3.99	11812
1.30	78.72	23.32	4.71	11013
1.35	56.08	31.30	5.92	9622
1.40	39.60	41.36	7.39	7828
1.60	27.86	53.96	9.06	5577
1.80	19.63	68.67	10.72	2918
2.00	17.48	73.40	11.12	2052
2.45	16.09	76.00	11.31	1575
2.45 SINK	13.47	78.53	11.79	1094

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ricketts
 Ricketts



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114175

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	4.74	2.07	1.27	14734
1.30	27.04	2.15	1.30	14732
1.35	17.35	3.76	1.63	14438
1.40	10.58	6.53	2.14	13990
1.60	15.23	11.85	3.15	13090
1.80	2.71	20.18	4.98	11638
2.00	1.44	35.12	7.63	8952
2.45	3.39	69.05	11.24	3374
2.45 SINK	17.52	79.86	13.94	1501

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	4.74	2.07	1.27	14734
1.30	31.78	2.14	1.30	14732
1.35	49.13	2.71	1.41	14628
1.40	59.71	3.39	1.54	14515
1.60	74.94	5.11	1.87	14226
1.80	77.65	5.63	1.98	14135
2.00	79.09	6.17	2.08	14041
2.45	82.48	8.75	2.46	13603
2.45 SINK	100.00	21.21	4.47	11482

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	21.21	4.47	11482
1.30	95.26	22.16	4.63	11321
1.35	68.22	30.10	5.95	9968
1.40	50.87	39.08	7.42	8444
1.60	40.29	47.63	8.81	6987
1.80	25.06	69.37	12.24	3279
2.00	22.35	75.34	13.12	2265
2.45	20.91	78.11	13.50	1805
2.45 SINK	17.52	79.86	13.94	1501

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
 ROK



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114175

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91
 DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	10.02	1.72	1.14	14740
1.35	10.88	2.85	1.31	14527
1.40	7.96	4.27	1.39	14228
1.60	28.93	7.86	1.41	13756
1.80	10.07	13.30	2.01	12591
2.00	2.52	33.00	4.29	8612
2.45	5.89	70.10	10.87	2674
2.45 SINK	23.73	81.98	11.53	1118

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	10.02	1.72	1.14	14740
1.35	20.90	2.31	1.23	14629
1.40	28.86	2.85	1.27	14518
1.60	57.79	5.36	1.34	14137
1.80	67.86	6.54	1.44	13907
2.00	70.38	7.48	1.54	13718
2.45	76.27	12.32	2.26	12865
2.45 SINK	100.00	28.85	4.46	10077

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	28.85	4.46	10077
1.30	100.00	28.85	4.46	10077
1.35	89.98	31.87	4.83	9558
1.40	79.10	35.86	5.32	8875
1.60	71.14	39.40	5.76	8276
1.80	42.21	61.01	8.73	4520
2.00	32.14	75.96	10.84	1991
2.45	29.62	79.62	11.40	1427
2.45 SINK	23.73	81.98	11.53	1118

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ryley
Ryley



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/27/91
MASTER WARNER NO. 114176

SAMPLE ID: ILLINOIS #3 RUN #91013003 SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WEIGHT %	% ASH	% SULFUR	BTU
+28 MESH	3.08	44.42	7.54	7523
28 X 100M	63.22	18.04	4.00	12043
100 X200M	12.62	17.86	4.32	12152
200 X 0	21.08	25.20	4.61	10877

CUMULATIVE DOWN

SCREEN SIZES	% WEIGHT	ASH	SULFUR	BTU
+28 MESH	3.08	44.42	7.54	7523
28 X 100M	66.30	19.27	4.16	11833
100 X200M	78.92	19.04	4.19	11884
200 X 0	100.00	20.34	4.28	11672

CUMULATIVE UP

SCREEN SIZES	% WEIGHT	ASH	SULFUR	BTU
+28 MESH	100.00	20.34	4.28	11672
28 X 100M	96.92	19.57	4.17	11804
100 X200M	33.70	22.45	4.50	11354
200 X 0	21.08	25.20	4.61	10877

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

page 1 of 1



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas G. Ryley
R. Ryley



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 6/28/91
MASTER WARNER NO. 114176

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 2/1/91 & 2/4/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR COMPOSITE +28 M X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	10.61	2.82	1.42	14702
1.30	19.87	3.87	1.57	14550
1.35	23.69	7.06	2.21	13973
1.40	10.18	10.51	2.75	13337
1.60	13.60	16.57	3.77	12344
1.80	4.47	22.82	5.16	11234
2.00	1.54	38.50	8.20	8441
2.45	2.26	63.46	9.17	4134
2.45 SINK	13.79	79.31	12.93	1047

CUMULATIVE RESULTS FOR COMPOSITE +28 M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	10.61	2.82	1.42	14702
1.30	30.48	3.50	1.52	14603
1.35	54.17	5.06	1.82	14327
1.40	64.34	5.92	1.97	14171
1.60	77.94	7.78	2.28	13852
1.80	82.41	8.59	2.44	13710
2.00	83.94	9.14	2.54	13614
2.45	86.20	10.57	2.72	13365
2.45 SINK	100.00	20.05	4.13	11666

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	20.05	4.13	11666
1.30	89.39	22.09	4.45	11306
1.35	69.52	27.30	5.27	10378
1.40	45.83	37.77	6.85	8520
1.60	35.66	45.54	8.02	7145
1.80	22.06	63.40	10.64	3941
2.00	17.59	73.71	12.03	2089
2.45	16.06	77.08	12.40	1482
2.45 SINK	13.79	79.31	12.93	1047

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rye
Rye



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

OPERATING CO: PROJECT #90D0101 TASK 2.2
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

DATE: 6/28/91
MASTER WARNER NO. 114176

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

DATE SAMPLED: 2/1/91 & 2/4/91

DATE RECEIVED: 6/25/91

FEED FOR SIZE		+28 MESH		
GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	14.05	7.12	1.93	14100
1.30	3.85	8.38	2.00	13867
1.35	3.42	10.21	2.33	13545
1.40	11.59	13.77	2.56	12961
1.60	15.44	22.06	3.42	11594
1.80	4.87	36.95	5.18	9030
2.00	2.44	49.21	6.79	6838
2.45	5.52	70.25	5.48	2803
2.45 SINK	38.82	78.59	13.86	548

CUMULATIVE RESULTS FOR SIZE +28 MESH

CUMULATIVE DOWN				
GRAVITY	% WT	% ASH	% S	BTU
1.25	14.05	7.12	1.93	14100
1.30	17.90	7.39	1.95	14050
1.35	21.32	7.84	2.01	13969
1.40	32.91	9.93	2.20	13614
1.60	48.35	13.80	2.59	12969
1.80	53.22	15.92	2.83	12608
2.00	55.66	17.38	3.00	12355
2.45	61.18	22.15	3.22	11494
2.45 SINK	100.00	44.06	7.35	7245

CUMULATIVE UP				
GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	44.06	7.35	7245
1.30	85.95	50.10	8.24	6124
1.35	82.10	52.06	8.53	5761
1.40	78.68	53.87	8.80	5422
1.60	67.09	60.80	9.88	4120
1.80	51.65	72.38	11.81	1886
2.00	46.78	76.07	12.50	1142
2.45	44.34	77.55	12.82	829
2.45 SINK	38.82	78.59	13.86	548

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Light
RCK



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 244, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 6/28/91
 MASTER WARNER NO. 114176

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT:

DATE SAMPLED: 2/1/91 & 2/4/91
 DATE RECEIVED: 6/25/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	13.78	2.72	1.42	14725
1.30	20.61	4.33	1.68	14433
1.35	29.12	7.86	2.35	13851
1.40	9.56	13.01	3.30	12984
1.60	10.74	19.78	4.88	11819
1.80	2.56	31.21	8.20	9815
2.00	1.30	41.42	9.59	8051
2.45	1.84	63.08	8.79	4134
2.45 SINK	10.49	78.11	12.08	840

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	13.78	2.72	1.42	14725
1.30	34.39	3.68	1.58	14550
1.35	63.51	5.60	1.93	14230
1.40	73.07	6.57	2.11	14067
1.60	83.81	8.26	2.46	13779
1.80	86.37	8.94	2.63	13661
2.00	87.67	9.42	2.74	13578
2.45	89.51	10.53	2.86	13384
2.45 SINK	100.00	17.62	3.83	12068

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	17.62	3.83	12068
1.30	86.22	20.00	4.21	11643
1.35	65.61	24.92	5.01	10767
1.40	36.49	38.53	7.13	8306
1.60	26.93	47.59	8.49	6645
1.80	16.19	66.04	10.89	3213
2.00	13.63	72.58	11.40	1972
2.45	12.33	75.87	11.59	1332
2.45 SINK	10.49	78.11	12.08	840

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rieft
2006



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-9765

DATE : 7- 9-91
MASTER WARNER NO. 114840

C. Q. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 491.5 KG

DATE SAMPLED: 02/01-04/91

DATE RECEIVED: 06/28/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	11.06	2.18	1.31	14738	0.00	0.00
1.30	24.25	2.70	1.33	14702	0.00	0.00
1.35	17.68	3.20	1.84	14243	0.00	0.00
1.40	12.24	8.30	2.39	13730	0.00	0.00
1.60	15.91	15.28	3.70	12553	0.00	0.00
1.80	3.03	25.85	6.49	10697	0.00	0.00
2.00	1.57	38.43	9.56	8395	0.00	0.00
2.45	1.89	59.39	10.96	4857	0.00	0.00
2.45 SINK	12.36	78.55	14.80	1517	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	11.06	2.18	1.31	14738	0.00	0.00
1.30	35.31	2.54	1.33	14713	0.00	0.00
1.35	52.99	3.42	1.50	14557	0.00	0.00
1.40	65.24	4.34	1.67	14401	0.00	0.00
1.60	81.14	6.48	2.06	14039	0.00	0.00
1.80	84.17	7.18	2.22	13919	0.00	0.00
2.00	85.75	7.76	2.36	13817	0.00	0.00
2.45	87.64	8.87	2.54	13624	0.00	0.00
2.45 SINK	100.00	17.48	4.06	12127	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	17.48	4.06	12127	0.00	0.00
1.30	88.94	19.39	4.40	11803	0.00	0.00
1.35	64.69	25.64	5.55	10716	0.00	0.00
1.40	47.01	33.33	6.95	9389	0.00	0.00
1.60	34.76	42.15	8.55	7860	0.00	0.00
1.80	18.86	64.81	12.64	3902	0.00	0.00
2.00	15.83	72.27	13.82	2600	0.00	0.00
2.45	14.25	76.01	14.29	1960	0.00	0.00
2.45 SINK	12.36	78.55	14.80	1517	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas G. Ruppert
ROR



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/997-7765
 DATE : 7- 9-91
 MASTER WARNER NO. 114840

C. Q. , INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
 SAMPLER #410001

OPERATING CO.:
 MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 491.5 KG

DATE SAMPLED: 02/01-04/91

DATE RECEIVED: 06/28/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	31	1.54	1.14	14906	0.00	0.00
1.30	17.35	3.05	1.34	14864	0.00	0.00
1.35	13.97	3.36	1.61	14547	0.00	0.00
1.40	10.59	4.74	1.53	14081	0.00	0.00
1.60	20.51	11.52	2.09	13153	0.00	0.00
1.80	10.99	15.54	2.82	12457	0.00	0.00
2.00	2.09	31.26	5.23	9461	0.00	0.00
2.45	3.27	63.82	10.10	4212	0.00	0.00
2.45 SINK	20.91	81.57	13.29	1329	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	31	1.54	1.14	14906	0.00	0.00
1.30	17.66	3.03	1.34	14865	0.00	0.00
1.35	31.64	3.17	1.46	14724	0.00	0.00
1.40	42.22	3.57	1.48	14563	0.00	0.00
1.60	62.74	6.17	1.68	14102	0.00	0.00
1.80	73.73	7.57	1.85	13857	0.00	0.00
2.00	75.82	8.22	1.94	13736	0.00	0.00
2.45	79.09	10.52	2.28	13342	0.00	0.00
2.45 SINK	100.00	25.38	4.58	10830	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	25.38	4.58	10830	0.00	0.00
1.30	99.69	25.45	4.59	10817	0.00	0.00
1.35	82.34	30.17	5.28	9964	0.00	0.00
1.40	68.36	35.65	6.03	9027	0.00	0.00
1.60	57.78	41.32	6.85	8101	0.00	0.00
1.80	37.26	57.72	9.47	5320	0.00	0.00
2.00	26.27	75.36	12.25	2335	0.00	0.00
2.45	24.18	79.17	12.86	1719	0.00	0.00
2.45 SINK	20.91	81.57	13.29	1329	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rychter
RECH



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galfitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmonia, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7- 9-91
MASTER WARNER NO. 115317

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 02/01-04/91

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 47.90

DATE RECEIVED: 07/03/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+100M	2.38	1.52	28.70	6.09	10458	11.64	14666
100M X 200M	46.19	1.33	16.40	3.95	12308	6.41	14722
200M X 0	51.43	2.15	23.20	4.23	11173	7.56	14547

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+100M	2.38	28.70	6.09	10458	11.64
+100M X 200M	48.57	17.00	4.06	12218	6.64
+100M X 0	100.00	20.19	4.15	11680	7.10

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+100M X 0	100.00	20.19	4.15	11680	7.10
100M X 0	97.62	19.98	4.10	11710	7.00
200M X 0	51.43	23.20	4.23	11173	7.56

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY Thomas A. Right

APPROVED BY Rocky



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/330-4444
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/241-1725
DATE: 7-9-91
MASTER WARNER NO. 114859

C. G. F. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED: 02/01-04/91

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 47.90

DATE RECEIVED: 07/03/91

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR COMPOSITE +200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	22.33	1.41	1.17	14647	0.00	0.00
1.30	22.03	2.91	1.50	14743	0.00	0.00
1.35	19.93	3.87	1.70	14002	0.00	0.00
1.40	12.09	6.98	1.95	13849	0.00	0.00
1.60	21.89	13.54	2.64	12862	0.00	0.00
1.80	4.09	22.64	4.20	11050	0.00	0.00
2.00	1.93	34.60	6.40	8886	0.00	0.00
2.45	2.32	60.80	8.05	4752	0.00	0.00
2.45 SINK	15.40	79.27	13.40	1527	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	22.33	1.41	1.17	14647	0.00	0.00
1.30	22.36	2.88	1.50	14742	0.00	0.00
1.35	42.29	3.35	1.59	14393	0.00	0.00
1.40	54.38	4.16	1.67	14272	0.00	0.00
1.60	76.27	6.85	1.95	13867	0.00	0.00
1.80	80.36	7.65	2.07	13724	0.00	0.00
2.00	82.28	8.28	2.17	13611	0.00	0.00
2.45	84.60	9.72	2.33	13368	0.00	0.00
2.45 SINK	100.00	20.43	4.03	11545	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	20.43	4.03	11545	0.00	0.00
1.30	99.67	20.49	4.04	11535	0.00	0.00
1.35	77.64	25.48	4.76	10624	0.00	0.00
1.40	57.71	32.95	5.82	9458	0.00	0.00
1.60	45.62	39.83	6.84	8294	0.00	0.00
1.80	23.73	64.08	10.72	4081	0.00	0.00
2.00	19.64	72.71	12.08	2630	0.00	0.00
2.45	17.72	76.85	12.70	1950	0.00	0.00
2.45 SINK	15.40	79.27	13.40	1527	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rypke
R. E. Rypke



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/663-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/928-8800
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 33409 813/971-1100

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 02/01-04/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 07/03/91

GROSS WEIGHT: 47.90

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR SIZE +200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	22.44	1.36	1.16	14570	0.00	0.00
1.30	22.16	3.62	1.61	14970	0.00	0.00
1.35	25.75	4.16	1.76	13746	0.00	0.00
1.40	14.69	7.83	2.14	13717	0.00	0.00
1.60	18.72	15.27	3.36	12451	0.00	0.00
1.80	3.00	23.77	5.46	10875	0.00	0.00
2.00	1.62	34.80	7.85	8950	0.00	0.00
2.45	1.82	60.52	9.06	4833	0.00	0.00
2.45 SINK	11.79	77.23	15.06	1669	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	22.44	1.36	1.16	14570	0.00	0.00
1.30	22.60	3.58	1.60	14963	0.00	0.00
1.35	48.35	3.89	1.69	14315	0.00	0.00
1.40	63.05	4.81	1.79	14175	0.00	0.00
1.60	81.77	7.20	2.15	13781	0.00	0.00
1.80	84.77	7.79	2.27	13678	0.00	0.00
2.00	86.39	8.29	2.37	13589	0.00	0.00
2.45	88.21	9.37	2.51	13409	0.00	0.00
2.45 SINK	100.00	17.37	3.99	12024	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	17.37	3.99	12024	0.00	0.00
1.30	99.56	17.45	4.00	12013	0.00	0.00
1.35	77.40	21.41	4.69	11166	0.00	0.00
1.40	51.65	30.00	6.15	9879	0.00	0.00
1.60	36.95	38.82	7.74	8354	0.00	0.00
1.80	18.23	63.00	12.24	4146	0.00	0.00
2.00	15.23	70.72	13.57	2822	0.00	0.00
2.45	13.61	75.00	14.26	2091	0.00	0.00
2.45 SINK	11.79	77.23	15.06	1669	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ryht
REILLY



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 06-27-91
MASTER WARNER NO. 114039

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT:
OTHER ID: AS RECEIVED SAMPLE

DATE SAMPLED: 2/1/91 & 2/4/91
DATE RECEIVED: 06/24/91

CERTIFICATE OF ANALYSIS

SCREEN SIZE	% WT	% ASH	% S	BTU
+3"	4.80	27.33	5.67	10459
3" X 1 1/2"	21.48	20.56	4.68	11754
1 1/2" X 3/4"	26.71	18.43	3.92	12102
3/4" X 3/8"	22.56	20.09	3.81	11780
3/8" X 28 MESH	20.56	26.33	3.97	10723
28M X 100M	2.14	24.75	4.12	10893
100M X 200M	0.63	27.97	5.15	10332
200M X 0	1.12	31.80	4.81	9795

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	% WT	% ASH	% S	BTU
+3"	4.80	27.33	5.67	10459
3" X 1 1/2"	26.28	21.80	4.86	11517
1 1/2" X 3/4"	52.99	20.10	4.39	11812
3/4" X 3/8"	75.55	20.10	4.21	11803
3/8" X 28 MESH	96.11	21.43	4.16	11572
28M X 100M	98.25	21.50	4.16	11557
100M X 200M	98.88	21.54	4.17	11549
200M X 0	100.00	21.66	4.17	11529

CUMULATIVE RETAINED - UP

SCREEN SIZE	% WT	% ASH	% S	BTU
+3"	100.00	21.66	4.17	11529
3" X 1 1/2"	95.20	21.37	4.10	11583
1 1/2" X 3/4"	73.72	21.61	3.93	11534
3/4" X 3/8"	47.01	23.42	3.94	11211
3/8" X 28 MESH	24.45	26.48	4.05	10685
28M X 100M	3.89	27.30	4.49	10486
100M X 200M	1.75	30.42	4.93	9988
200M X 0	1.12	31.80	4.81	9795

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL

Thomas A. Rife
Rocky



GOULD energy
Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/928-1100
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 33511 813/681-1100
DATE: 7-9-91
MASTER WARNER NO. 114859

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #3 RUN #91013003
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED: 02/01-04/91

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 07/03/91

GROSS WEIGHT: 47.90

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.21	1.51	1.19	14807	0.00	0.00
1.30	21.90	2.18	1.40	14513	0.00	0.00
1.35	14.11	3.35	1.59	14471	0.00	0.00
1.40	9.48	5.65	1.66	14054	0.00	0.00
1.60	25.06	12.24	2.10	13169	0.00	0.00
1.80	5.18	21.99	3.47	11152	0.00	0.00
2.00	2.23	34.45	5.35	8840	0.00	0.00
2.45	2.82	60.98	7.39	4700	0.00	0.00
2.45 SINK	19.00	80.54	12.37	1439	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.21	1.51	1.19	14807	0.00	0.00
1.30	22.11	2.18	1.40	14516	0.00	0.00
1.35	36.23	2.63	1.47	14499	0.00	0.00
1.40	45.70	3.26	1.51	14406	0.00	0.00
1.60	70.77	6.44	1.72	13968	0.00	0.00
1.80	75.95	7.50	1.84	13776	0.00	0.00
2.00	78.18	8.27	1.94	13635	0.00	0.00
2.45	81.00	10.11	2.13	13324	0.00	0.00
2.45 SINK	100.00	23.49	4.08	11066	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	23.49	4.08	11066	0.00	0.00
1.30	99.79	23.53	4.08	11058	0.00	0.00
1.35	77.89	29.54	4.84	10086	0.00	0.00
1.40	63.77	35.33	5.55	9116	0.00	0.00
1.60	34.30	40.52	6.23	8254	0.00	0.00
1.80	29.23	44.76	9.78	4041	0.00	0.00
2.00	24.05	73.97	11.14	2509	0.00	0.00
2.45	21.82	78.01	11.73	1861	0.00	0.00
2.45 SINK	19.00	80.54	12.37	1439	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ruffin
Ruffin

APPENDIX A (cont.)

**Raw Coal Laboratory Analysis
of the Illinois No. 5 Seam Coal**



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-19-91
MASTER WARNER NO. 114474

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN# 91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 2460.6 KG

DATE RECEIVED: 06/27/91

OTHER ID: AS RECEIVED SAMPLE

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO ₂ PER MBTU	MAF BTU
+3"SQ	10.26	2.34	16.07	7.13	12294	11.59	14648
3"SQ X 1 1/2"SQ	11.85	1.90	15.20	5.90	12428	9.49	14656
1 1/2"SQ X 3/4"SQ	28.42	2.52	12.99	4.80	12965	7.40	14900
3/4"SQ X 3/8"SQ	16.45	2.53	14.11	4.45	12733	6.98	14824
3/8"SQ X 28M	21.78	2.85	20.78	4.67	11662	8.00	14721
28M X 100M	4.91	1.58	22.49	5.04	11213	8.98	14465
100M X 200M	1.52	1.51	31.35	5.32	9543	11.14	13901
200M X 0	4.81	2.24	40.99	3.39	8159	8.30	13826

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO ₂ PER MBTU
+3"SQ	10.26	16.07	7.13	12294	11.59
+3"SQ X 1 1/2"SQ	22.10	15.61	6.47	12366	10.45
+3"SQ X 3/4"SQ	50.52	14.13	5.53	12703	8.70
+3"SQ X 3/8"SQ	66.97	14.13	5.27	12711	8.28
+3"SQ X 28M	88.75	15.76	5.12	12453	8.21
+3"SQ X 100M	93.67	16.11	5.12	12388	8.26
+3"SQ X 200M	95.19	16.36	5.12	12343	8.29
+3"SQ X 0	100.00	17.54	5.04	12141	8.29

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO ₂ PER MBTU
+3"SQ X 0	100.00	17.54	5.04	12141	8.29
3"SQ X 0	89.74	17.71	4.80	12124	7.91
1 1/2"SQ X 0	77.90	18.09	4.63	12077	7.66
3/4"SQ X 0	49.48	21.02	4.53	11568	7.82
3/8"SQ X 0	33.03	24.47	4.57	10987	8.31
28M X 0	11.25	31.60	4.37	9680	9.02
100M X 0	6.33	38.68	3.85	8491	9.06
200M X 0	4.81	40.99	3.39	8159	8.30

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY *[Signature]*

APPROVED BY *[Signature]*



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 7/19/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 6/27/91

GROSS WEIGHT: 2460.6 KG

OTHER ID: AS RECEIVED SAMPLE

FEED FOR COMPOSITE +3" X 0

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	1.09	3.71	2.28	14400
1.30	27.77	4.15	2.45	14365
1.35	33.71	9.39	2.92	13541
1.40	11.30	14.01	3.87	12780
1.60	8.52	19.17	6.03	11686
1.80	3.89	28.95	7.98	9817
2.00	2.44	39.91	10.94	7685
2.45	2.92	51.88	15.29	5624
2.45 SINK	8.95	73.70	16.71	2131

CUMULATIVE RESULTS FOR COMPOSITE +3" X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	1.09	3.71	2.28	14400
1.30	28.86	4.13	2.44	14366
1.35	62.57	6.96	2.70	13922
1.40	73.87	8.04	2.88	13747
1.60	82.39	9.19	3.21	13534
1.80	86.28	10.08	3.42	13366
2.00	88.73	10.91	3.63	13210
2.45	91.65	12.21	4.00	12968
2.45 SINK	100.00	17.34	5.06	12063

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	17.34	5.06	12063
1.30	98.91	17.49	5.09	12037
1.35	71.13	22.70	6.12	11129
1.40	37.43	34.70	9.01	8956
1.60	26.13	43.65	11.23	7303
1.80	17.61	55.49	13.74	5182
2.00	13.71	63.03	15.38	3866
2.45	11.27	68.04	16.34	3037
2.45 SINK	8.35	73.70	16.71	2131

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Shuman
 Robert Shuman



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 07/19/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
 SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 062791

GROSS WEIGHT: 2460.6 KG

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE +3"

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	41.39	4.50	2.38	14320
1.35	24.41	9.30	2.88	13581
1.40	5.89	12.77	4.36	13054
1.60	5.87	22.69	7.11	11242
1.80	7.98	32.30	10.40	9180
2.00	3.30	35.73	17.21	8378
2.45	5.10	39.98	25.83	7634
2.45 SINK	5.86	58.91	27.78	4231

CUMULATIVE RESULTS FOR SIZE +3"

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	41.39	4.50	2.38	14320
1.35	65.80	6.28	2.57	14046
1.40	71.79	6.82	2.72	13963
1.60	77.76	8.04	3.05	13754
1.80	85.74	10.30	3.74	13328
2.00	89.04	11.24	4.24	13145
2.45	94.14	12.80	5.41	12846
2.45 SINK	100.00	15.50	6.72	12342

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	15.50	6.72	12342
1.30	100.00	15.50	6.72	12342
1.35	58.61	23.27	9.78	10844
1.40	34.20	33.24	14.70	9063
1.60	28.21	37.58	16.90	8215
1.80	22.24	41.58	19.53	7402
2.00	14.26	46.78	24.64	6408
2.45	10.86	50.10	26.87	5815
2.45 SINK	5.86	58.91	27.78	4231

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Sheehan
 Robert Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

DATE: 07/19/91
MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2
MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 2460.6 KG

DATE SAMPLED:
DATE RECEIVED: 062791

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE		+3" SQ X 1 1/2" SQ		
GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	27.37	4.36	2.37	14405
1.35	33.64	8.76	2.90	13691
1.40	13.64	13.34	4.14	12909
1.60	9.33	18.81	7.75	11888
1.80	4.75	34.28	7.24	8835
2.00	2.63	41.50	12.22	7335
2.45	2.66	44.90	21.53	7104
2.45 SINK	5.98	55.45	29.00	4599

CUMULATIVE RESULTS FOR SIZE +3" SQ X 1 1/2" SQ

CUMULATIVE DOWN				
GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	27.37	4.36	2.37	14405
1.35	61.01	6.79	2.66	14011
1.40	74.65	7.98	2.93	13810
1.60	83.98	9.19	3.47	13596
1.80	88.73	10.53	3.67	13341
2.00	91.36	11.42	3.92	13169
2.45	94.02	12.37	4.41	12997
2.45 SINK	100.00	14.94	5.88	12495

CUMULATIVE UP				
GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	14.94	5.88	12495
1.30	100.00	14.94	5.88	12495
1.35	72.63	18.93	7.21	11776
1.40	38.99	27.71	10.93	10122
1.60	25.35	35.44	14.58	8622
1.80	16.02	45.13	18.55	6720
2.00	11.27	49.70	23.32	5829
2.45	6.54	52.20	26.70	5370
2.45 SINK	5.98	55.45	29.00	4599

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Robert M. McKee



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 07/19/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2460.6 KG

DATE RECEIVED: 062791

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE 1 1/2"SQ X 3/4"SQ

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	1.09	4.25	2.35	14389
1.30	27.48	4.44	2.81	14355
1.35	41.34	8.70	3.35	13475
1.40	13.15	14.59	4.38	12706
1.60	6.66	20.51	8.20	11280
1.80	3.03	31.02	9.78	9248
2.00	2.72	41.10	10.87	7408
2.45	2.24	51.97	14.87	5517
2.45 SINK	2.28	59.45	32.27	4201

CUMULATIVE RESULTS FOR SIZE 1 1/2"SQ X 3/4"SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	1.09	4.25	2.35	14389
1.30	28.57	4.43	2.79	14355
1.35	69.91	7.55	3.12	13835
1.40	83.06	8.66	3.32	13656
1.60	89.72	9.54	3.68	13480
1.80	92.75	10.24	3.88	13342
2.00	95.47	11.12	4.08	13173
2.45	97.71	12.06	4.33	12997
2.45 SINK	100.00	13.14	4.97	12796

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	13.14	4.97	12796
1.30	98.91	13.24	5.00	12778
1.35	71.43	16.63	5.84	12172
1.40	30.09	26.16	9.26	10381
1.60	16.94	35.12	13.05	8676
1.80	10.28	44.59	16.19	6824
2.00	7.25	50.25	18.87	5811
2.45	4.53	55.75	23.67	4852
2.45 SINK	2.28	59.45	32.27	4201

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Sheehan
 Robert Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/832-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

C.O. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 07/19/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2460.6 KG

DATE RECEIVED: 062791

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE		3/4" SQ X 3/8" SQ		
GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.45	4.30	2.01	14304
1.30	28.01	4.59	2.34	14320
1.35	40.08	10.14	2.68	13475
1.40	13.44	14.80	3.78	12678
1.60	7.93	20.30	7.19	11541
1.80	2.37	31.03	10.86	9652
2.00	2.03	41.30	12.17	7326
2.45	2.61	52.40	15.18	5134
2.45 SINK	3.08	67.15	23.34	3373

CUMULATIVE RESULTS FOR SIZE 3/4" SQ X 3/8" SQ

CUMULATIVE DOWN				
GRAVITY	% WT	% ASH	% S	BTU
1.25	0.45	4.30	2.01	14304
1.30	28.46	4.59	2.33	14320
1.35	68.54	7.83	2.54	13826
1.40	81.98	8.98	2.74	13638
1.60	89.91	9.97	3.13	13453
1.80	92.28	10.52	3.33	13355
2.00	94.31	11.18	3.52	13225
2.45	96.92	12.29	3.84	13007
2.45 SINK	100.00	13.98	4.44	12711

CUMULATIVE UP				
GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	13.98	4.44	12711
1.30	99.55	14.02	4.45	12703
1.35	71.54	17.71	5.27	12071
1.40	31.46	27.36	8.58	10281
1.60	18.02	36.73	12.15	8494
1.80	10.09	49.65	16.05	6099
2.00	7.72	55.37	17.64	5008
2.45	5.69	60.38	19.60	4181
2.45 SINK	3.08	67.15	23.34	3373

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Sheehan
 Robert Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galtzert Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.Q. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 07/19/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 2460.6 KG

DATE SAMPLED:

DATE RECEIVED: 062791

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE 3/8" SQ X 28M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	2.38	3.50	2.42	14408
1.30	23.76	3.94	2.28	14365
1.35	34.71	9.24	2.60	13543
1.40	11.30	14.81	3.31	12638
1.60	8.95	22.93	5.28	11121
1.80	2.30	31.73	8.73	9351
2.00	1.72	44.07	9.98	7068
2.45	2.80	56.66	10.50	4744
2.45 SINK	12.08	79.33	11.50	1450

CUMULATIVE RESULTS FOR SIZE 3/8" SQ X 28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	2.38	3.50	2.42	14408
1.30	26.14	3.90	2.29	14369
1.35	60.85	6.95	2.47	13898
1.40	72.15	8.18	2.60	13700
1.60	81.10	9.74	2.90	13416
1.80	83.40	10.35	3.06	13304
2.00	85.12	11.03	3.20	13178
2.45	87.92	12.48	3.43	12909
2.45 SINK	100.00	20.56	4.40	11525

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	20.56	4.40	11525
1.30	97.62	20.97	4.45	11455
1.35	73.86	26.45	5.15	10518
1.40	39.15	41.71	7.41	7837
1.60	27.85	52.62	9.08	5889
1.80	18.90	66.97	10.68	3411
2.00	16.60	71.85	11.17	2558
2.45	14.88	75.06	11.31	2070
2.45 SINK	12.08	79.33	11.50	1450

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Sheehan
 Robert Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 07/19/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
 SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 062791

GROSS WEIGHT: 2460.6 KG

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.58	1.38	1.92	14711
1.30	42.99	2.18	2.14	14486
1.35	14.54	7.50	2.60	13610
1.40	6.08	11.28	2.83	13036
1.60	10.80	17.37	3.84	11976
1.80	2.30	30.70	4.86	9674
2.00	1.29	44.34	6.50	7216
2.45	2.36	61.46	7.79	4240
2.45 SINK	19.06	76.87	14.17	1386

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	0.58	1.38	1.92	14711
1.30	43.57	2.17	2.14	14489
1.35	58.11	3.50	2.25	14269
1.40	64.19	4.24	2.31	14152
1.60	74.99	6.13	2.46	13839
1.80	77.29	6.86	2.53	13715
2.00	78.58	7.48	2.60	13608
2.45	80.94	9.05	2.75	13395
2.45 SINK	100.00	21.98	4.92	11058

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	21.98	4.92	11058
1.30	99.42	22.10	4.94	11036
1.35	56.43	37.27	7.08	8408
1.40	41.89	47.61	8.63	6603
1.60	35.81	53.77	9.62	5510
1.80	25.01	69.49	12.33	2718
2.00	22.71	73.42	13.07	2014
2.45	21.42	75.17	13.47	1700
2.45 SINK	19.06	76.87	14.17	1386

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

ROALG
 Robert Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 07/19/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

MINE: CUSTOMER PROVIDED

DATE SAMPLED:

GROSS WEIGHT: 2460.6 KG

DATE RECEIVED: 062791

OTHER ID: AS RECEIVED SAMPLE

FEEB FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	9.67	1.75	1.89	14572
1.30	23.27	2.60	1.97	14530
1.35	11.45	4.40	2.11	14232
1.40	6.34	7.49	2.33	13715
1.60	9.20	14.36	2.52	12313
1.80	3.69	20.82	3.03	11552
2.00	1.59	33.71	4.23	9038
2.45	2.73	67.53	4.94	3641
2.45 SINK	32.06	78.25	10.11	815

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU
1.25	9.67	1.75	1.89	14572
1.30	32.94	2.35	1.95	14572
1.35	44.39	2.88	1.99	14484
1.40	50.73	3.46	2.03	14388
1.60	59.93	5.13	2.11	14069
1.80	63.62	6.04	2.16	13923
2.00	65.21	6.71	2.21	13804
2.45	67.94	9.16	2.32	13396
2.45 SINK	100.00	31.31	4.82	9362

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	31.31	4.82	9362
1.30	90.33	34.47	5.13	8794
1.35	67.06	45.53	6.23	6804
1.40	55.61	54.00	7.08	5274
1.60	49.27	59.99	7.69	4188
1.80	40.07	70.46	8.87	2323
2.00	36.38	75.50	9.47	1386
2.45	34.79	77.41	9.70	1037
2.45 SINK	32.06	78.25	10.11	815

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert T. Sheehan
 Robert T. Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garmania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

C.O. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

DATE: 07/18/91
 MASTER WARNER NO. 114483

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
 SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 062791

GROSS WEIGHT: 2460.6 KG

OTHER ID: AS RECEIVED SAMPLE

FEED FOR SIZE		200M X 0		
GRAVITY	% WT	% ASH	% SULFUR	BTU
1.25	0.00	0.00	0.00	0
1.30	4.89	2.79	1.86	14366
1.35	8.87	2.88	1.91	14327
1.40	5.49	4.41	1.71	13943
1.60	20.49	8.72	1.23	13575
1.80	12.32	13.04	1.29	12813
2.00	4.69	30.44	1.81	9601
2.45	5.22	65.72	3.55	3795
2.45 SINK	37.94	84.66	6.42	671

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN				
GRAVITY	% WT	% ASH	% S	BTU
1.25	0.00	0.00	0.00	0
1.30	4.89	2.79	1.86	14366
1.35	13.86	2.85	1.89	14341
1.40	19.35	3.29	1.84	14228
1.60	39.84	6.08	1.53	13892
1.80	52.15	7.73	1.47	13637
2.00	56.84	9.60	1.50	13304
2.45	62.06	14.32	1.67	12505
2.45 SINK	100.00	41.01	3.47	8015

CUMULATIVE UP				
GRAVITY	% WT	% ASH	% S	BTU
1.25	100.00	41.01	3.47	8015
1.30	99.99	41.01	3.47	8015
1.35	95.01	43.01	3.56	7681
1.40	86.14	47.14	3.73	6998
1.60	80.65	50.05	3.86	6525
1.80	60.16	64.13	4.76	4123
2.00	47.85	77.28	5.66	1887
2.45	43.16	82.37	6.07	1049
2.45 SINK	37.94	84.66	6.42	671

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Shuhan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-16-91
MASTER WARNER NO. 115119

C. G., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 070291

GROSS WEIGHT: 1617.70 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO ₂ PER MBTU	MAF BTU
+1 1/2" SQ	2.79	2.04	21.01	9.12	11668	15.62	14771
1 1/2" SQ X 3/4" SQ	32.13	2.27	13.58	4.78	12906	7.40	14934
3/4" SQ X 3/8" SQ	24.18	2.30	13.81	4.51	12615	7.14	14635
3/8" SQ X 28M	31.92	2.52	18.50	4.27	11994	7.11	14717
28M X 100M	4.40	1.70	22.88	4.62	11308	8.16	14663
100M X 200M	1.62	2.09	29.79	5.51	9807	11.23	13968
200M X 0	2.94	3.31	42.35	4.02	7852	10.23	13621

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO ₂ PER MBTU
+1 1/2" SQ	2.79	21.01	9.12	11668	15.62
+1 1/2" SQ X 3/4" SQ	34.93	14.17	5.13	12807	8.00
+1 1/2" SQ X 3/8" SQ	59.11	14.02	4.88	12728	7.66
+1 1/2" SQ X 28M	91.03	15.59	4.66	12471	7.47
+1 1/2" SQ X 100M	95.43	15.93	4.66	12417	7.50
+1 1/2" SQ X 200M	97.06	16.16	4.67	12374	7.54
+1 1/2" SQ X 0	100.00	16.93	4.66	12241	7.61

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO ₂ PER MBTU
+1 1/2" SQ X 0	100.00	16.93	4.66	12241	7.61
1 1/2" SQ X 0	97.21	16.82	4.53	12257	7.38
3/4" SQ X 0	65.07	18.41	4.40	11937	7.37
3/8" SQ X 0	40.89	21.14	4.34	11536	7.52
28M X 0	8.97	30.52	4.58	9903	9.24
100M X 0	4.57	37.89	4.55	8547	10.64
200M X 0	2.94	42.35	4.02	7852	10.23

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY *James A. Rife*

APPROVED BY *ROCKY*



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/682-5785

DATE: 7-16-91
MASTER WARNER NO. 115127

C. G. J. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 070291

GROSS WEIGHT: 1617.70 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR COMPOSITE +3/4" SQ X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.72	2.29	2.01	14696	0.00	0.00
1.30	28.68	4.11	2.27	14401	0.00	0.00
1.35	33.07	9.22	2.36	13609	0.00	0.00
1.40	12.70	14.02	3.52	12792	0.00	0.00
1.60	8.09	19.23	6.10	11824	0.00	0.00
1.80	2.61	30.36	7.81	9463	0.00	0.00
2.00	1.79	42.99	8.94	7290	0.00	0.00
2.45	3.00	55.35	13.02	5155	0.00	0.00
2.45 SINK	8.34	73.62	17.86	2181	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +3/4" SQ X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.72	2.29	2.01	14696	0.00	0.00
1.30	30.41	4.01	2.25	14417	0.00	0.00
1.35	63.47	6.72	2.41	13996	0.00	0.00
1.40	76.18	7.94	2.60	13795	0.00	0.00
1.60	84.27	9.02	2.93	13606	0.00	0.00
1.80	86.87	9.66	3.08	13482	0.00	0.00
2.00	88.66	10.33	3.20	13357	0.00	0.00
2.45	91.66	11.81	3.52	13089	0.00	0.00
2.45 SINK	100.00	16.96	4.72	12179	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	16.96	4.72	12179	0.00	0.00
1.30	98.28	17.22	4.76	12135	0.00	0.00
1.35	69.59	22.62	5.79	11201	0.00	0.00
1.40	36.53	34.76	8.72	9021	0.00	0.00
1.60	23.82	45.82	11.49	7010	0.00	0.00
1.80	15.73	59.49	14.26	4535	0.00	0.00
2.00	13.13	65.28	15.54	3556	0.00	0.00
2.45	11.34	68.79	16.58	2967	0.00	0.00
2.45 SINK	8.34	73.62	17.86	2181	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
2008/07/16



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/688-6285

DATE: 7-16-91
MASTER WARNER NO. 115127

C. G. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 1617.70 KG

DATE RECEIVED: 070291

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE +3/4" SQ

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.25	2.99	2.10	14565	0.00	0.00
1.30	26.97	4.29	2.21	14468	0.00	0.00
1.35	39.13	9.14	2.57	13609	0.00	0.00
1.40	12.82	14.20	3.87	12762	0.00	0.00
1.60	6.69	19.74	7.81	11787	0.00	0.00
1.80	2.63	34.42	8.05	9162	0.00	0.00
2.00	2.40	44.36	9.12	7023	0.00	0.00
2.45	3.29	52.60	15.24	5529	0.00	0.00
2.45 SINK	4.82	60.10	36.01	3973	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +3/4" SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.25	2.99	2.10	14565	0.00	0.00
1.30	28.22	4.23	2.21	14472	0.00	0.00
1.35	67.35	7.08	2.42	13971	0.00	0.00
1.40	80.17	8.22	2.65	13777	0.00	0.00
1.60	86.86	9.11	3.05	13624	0.00	0.00
1.80	89.49	9.85	3.19	13493	0.00	0.00
2.00	91.89	10.76	3.35	13324	0.00	0.00
2.45	95.18	12.20	3.76	13054	0.00	0.00
2.45 SINK	100.00	14.51	5.31	12617	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.51	5.31	12617	0.00	0.00
1.30	98.75	14.66	5.35	12592	0.00	0.00
1.35	71.78	18.55	6.54	11887	0.00	0.00
1.40	32.65	29.83	11.29	9824	0.00	0.00
1.60	19.83	39.93	16.09	7925	0.00	0.00
1.80	13.14	50.21	20.30	5959	0.00	0.00
2.00	10.51	54.15	23.36	5137	0.00	0.00
2.45	8.11	57.06	27.59	4604	0.00	0.00
2.45 SINK	4.82	60.10	36.01	3973	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas G. Rye
Rye



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/680-6785

DATE: 7-16-91
MASTER WARNER NO. 115127

C. Q. , INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 1617.70 KG

DATE SAMPLED:

DATE RECEIVED: 070291

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 3/4" SQ X 3/8" SQ

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.20	2.63	2.27	14666	0.00	0.00
1.30	30.22	4.47	2.56	14351	0.00	0.00
1.35	36.86	9.75	2.63	13508	0.00	0.00
1.40	13.90	14.66	3.72	12726	0.00	0.00
1.60	7.72	20.03	7.36	11695	0.00	0.00
1.80	2.43	32.25	10.45	8144	0.00	0.00
2.00	1.39	43.09	10.60	7432	0.00	0.00
2.45	2.73	52.85	14.09	5341	0.00	0.00
2.45 SINK	3.55	64.49	25.96	3607	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 3/4" SQ X 3/8" SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.20	2.63	2.27	14666	0.00	0.00
1.30	31.42	4.40	2.55	14363	0.00	0.00
1.35	68.28	7.29	2.59	13902	0.00	0.00
1.40	82.18	8.53	2.78	13703	0.00	0.00
1.60	89.89	9.52	3.18	13530	0.00	0.00
1.80	92.32	10.12	3.37	13389	0.00	0.00
2.00	93.72	10.61	3.47	13300	0.00	0.00
2.45	96.45	11.81	3.77	13075	0.00	0.00
2.45 SINK	100.00	13.68	4.56	12739	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	13.68	4.56	12739	0.00	0.00
1.30	98.80	13.81	4.59	12715	0.00	0.00
1.35	68.58	17.93	5.48	11994	0.00	0.00
1.40	31.72	27.43	8.80	10234	0.00	0.00
1.60	17.82	37.39	12.77	8292	0.00	0.00
1.80	10.11	50.64	16.90	5694	0.00	0.00
2.00	7.68	56.47	18.95	4918	0.00	0.00
2.45	6.28	59.43	20.79	4361	0.00	0.00
2.45 SINK	3.55	64.49	25.96	3607	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas G. Rypke
TGR



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/485-5785

DATE: 7-16-91
MASTER WARNER NO. 115127

C. O., INC.

1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 070291

GROSS WEIGHT: 1617.70 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 3/8" SQ X 28M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.04	1.88	1.90	14763	0.00	0.00
1.30	30.12	4.08	2.17	14359	0.00	0.00
1.35	29.22	9.30	2.54	13660	0.00	0.00
1.40	12.78	14.33	3.21	12758	0.00	0.00
1.60	8.32	21.24	5.49	11479	0.00	0.00
1.80	1.99	31.38	8.93	9613	0.00	0.00
2.00	1.37	43.24	9.41	7140	0.00	0.00
2.45	2.51	55.78	11.19	5430	0.00	0.00
2.45 SINK	10.65	77.51	12.36	1743	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 3/8" SQ X 28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.04	1.88	1.90	14763	0.00	0.00
1.30	33.16	3.88	2.14	14396	0.00	0.00
1.35	62.38	6.42	2.33	14051	0.00	0.00
1.40	75.16	7.76	2.48	13831	0.00	0.00
1.60	83.48	9.10	2.78	13597	0.00	0.00
1.80	85.47	9.62	2.92	13504	0.00	0.00
2.00	86.84	10.15	3.03	13403	0.00	0.00
2.45	89.35	11.44	3.25	13179	0.00	0.00
2.45 SINK	100.00	18.47	4.22	11962	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	18.47	4.22	11962	0.00	0.00
1.30	96.96	18.99	4.30	11874	0.00	0.00
1.35	66.84	25.71	5.26	10754	0.00	0.00
1.40	37.62	38.46	7.37	8497	0.00	0.00
1.60	24.84	50.88	9.51	6305	0.00	0.00
1.80	16.52	65.80	11.53	3701	0.00	0.00
2.00	14.53	70.52	11.88	2889	0.00	0.00
2.45	13.16	73.36	12.14	2447	0.00	0.00
2.45 SINK	10.65	77.51	12.36	1743	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas J. Ruff
Rocky



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-16-91
MASTER WARNER NO. 115127

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 070291

GROSS WEIGHT: 1617.70 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	17	2.05	1.94	14735	0.00	0.00
1.30	38.83	2.23	1.94	14534	0.00	0.00
1.35	16.07	6.46	2.33	13777	0.00	0.00
1.40	10.59	10.89	2.55	12999	0.00	0.00
1.60	9.70	18.59	3.41	11747	0.00	0.00
1.80	2.42	30.46	4.92	9668	0.00	0.00
2.00	1.17	43.42	6.20	7483	0.00	0.00
2.45	2.40	59.07	7.59	4613	0.00	0.00
2.45 SINK	18.66	77.79	12.40	1446	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	17	2.05	1.94	14735	0.00	0.00
1.30	39.00	2.23	1.94	14535	0.00	0.00
1.35	55.07	3.46	2.05	14314	0.00	0.00
1.40	65.66	4.66	2.13	14102	0.00	0.00
1.60	75.36	6.45	2.30	13799	0.00	0.00
1.80	77.78	7.20	2.38	13670	0.00	0.00
2.00	78.95	7.74	2.44	13579	0.00	0.00
2.45	81.34	9.25	2.59	13315	0.00	0.00
2.45 SINK	100.00	22.04	4.42	11100	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	22.04	4.42	11100	0.00	0.00
1.30	99.83	22.07	4.42	11094	0.00	0.00
1.35	61.00	34.70	6.00	8904	0.00	0.00
1.40	44.93	44.80	7.32	7161	0.00	0.00
1.60	34.34	55.26	8.79	5361	0.00	0.00
1.80	24.64	69.69	10.91	2848	0.00	0.00
2.00	22.22	73.96	11.56	2104	0.00	0.00
2.45	21.05	75.66	11.86	1806	0.00	0.00
2.45 SINK	18.66	77.79	12.40	1446	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas H. Ripton
Ripton



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5285

DATE: 7-16-91
MASTER WARNER NO. 115127

C. G. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 070291

GROSS WEIGHT: 1617.70 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.59	1.44	1.95	14856	0.00	0.00
1.30	24.48	2.62	1.95	14344	0.00	0.00
1.35	14.82	4.05	2.18	14265	0.00	0.00
1.40	8.48	6.70	2.27	13762	0.00	0.00
1.60	13.90	12.20	2.30	12873	0.00	0.00
1.80	3.65	20.28	3.04	11497	0.00	0.00
2.00	1.30	36.81	4.78	8605	0.00	0.00
2.45	3.95	69.24	8.67	2716	0.00	0.00
2.45 SINK	28.84	77.64	12.37	1027	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.59	1.44	1.95	14856	0.00	0.00
1.30	25.06	2.59	1.95	14356	0.00	0.00
1.35	39.88	3.13	2.04	14322	0.00	0.00
1.40	48.36	3.76	2.08	14259	0.00	0.00
1.60	62.26	5.64	2.13	13950	0.00	0.00
1.80	65.91	6.45	2.18	13814	0.00	0.00
2.00	67.21	7.04	2.23	13713	0.00	0.00
2.45	71.16	10.49	2.59	13103	0.00	0.00
2.45 SINK	100.00	29.86	5.41	9620	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	29.86	5.41	9620	0.00	0.00
1.30	99.41	30.03	5.43	9589	0.00	0.00
1.35	74.94	38.98	6.56	8036	0.00	0.00
1.40	60.12	47.59	7.64	6501	0.00	0.00
1.60	51.64	54.30	8.53	5275	0.00	0.00
1.80	37.74	69.80	10.82	2478	0.00	0.00
2.00	34.09	75.11	11.65	1511	0.00	0.00
2.45	32.79	76.63	11.93	1230	0.00	0.00
2.45 SINK	28.84	77.64	12.37	1027	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
ROR



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-16-91
MASTER WARNER NO. 115127

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 070291

GROSS WEIGHT: 1617.70 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 1 1/2" X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.23	2.13	1.92	14636	0.00	0.00
1.30	7.95	2.99	1.96	14078	0.00	0.00
1.35	7.30	3.20	1.99	14302	0.00	0.00
1.40	6.20	4.72	1.81	14147	0.00	0.00
1.60	19.66	8.58	1.33	13618	0.00	0.00
1.80	10.11	13.86	1.47	12197	0.00	0.00
2.00	3.50	31.46	2.24	9271	0.00	0.00
2.45	7.34	70.12	8.64	2564	0.00	0.00
2.45 SINK	37.72	84.50	7.23	733	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.23	2.13	1.92	14636	0.00	0.00
1.30	8.17	2.97	1.96	14093	0.00	0.00
1.35	15.48	3.08	1.97	14192	0.00	0.00
1.40	21.67	3.55	1.93	14179	0.00	0.00
1.60	41.33	5.94	1.64	13912	0.00	0.00
1.80	51.44	7.50	1.61	13575	0.00	0.00
2.00	54.94	9.02	1.65	13301	0.00	0.00
2.45	62.28	16.22	2.47	12036	0.00	0.00
2.45 SINK	100.00	41.98	4.27	7772	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	41.98	4.27	7772	0.00	0.00
1.30	99.77	42.07	4.27	7757	0.00	0.00
1.35	91.83	45.45	4.47	7210	0.00	0.00
1.40	84.52	49.10	4.69	6597	0.00	0.00
1.60	78.33	52.61	4.92	6000	0.00	0.00
1.80	58.67	67.36	6.12	3447	0.00	0.00
2.00	48.56	78.51	7.08	1625	0.00	0.00
2.45	45.06	82.16	7.46	1031	0.00	0.00
2.45 SINK	37.72	84.50	7.23	733	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rife
Rife



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-22-91
MASTER WARNER NO. 115644

C. G., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN 91013002
 #41001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 7/8/91

GROSS WEIGHT: 3833.4 KG

OTHER ID: LABORATORY SPLIT OF AS RECEIVED SAMPLE CRUSHED TO 3/4" X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+3/4" SQ	2.36	2.19	13.94	5.21	12730	8.18	14791
3/4" SQ X 3/8" SQ	40.08	2.32	15.09	4.83	12446	7.75	14658
3/8" SQ X 28M	48.34	1.22	17.53	4.92	11955	8.22	14497
28M X 100M	4.64	1.45	20.16	5.04	11643	8.65	14583
100M X 200M	1.82	1.54	29.06	5.43	10169	10.67	14335
200M X 0	2.76	3.40	40.01	4.14	8291	9.98	13822

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+3/4" SQ	2.36	13.94	5.21	12730	8.18
+3/4" SQ X 3/8" SQ	42.44	15.03	4.85	12462	7.78
+3/4" SQ X 28M	90.78	16.36	4.89	12192	8.01
+3/4" SQ X 100M	95.42	16.55	4.90	12166	8.05
+3/4" SQ X 200M	97.24	16.78	4.91	12128	8.09
+3/4" SQ X 0	100.00	17.42	4.89	12022	8.13

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+3/4" SQ X 0	100.00	17.42	4.89	12022	8.13
3/4" SQ X 0	97.64	17.51	4.88	12005	8.12
3/8" SQ X 0	57.56	19.19	4.91	11698	8.39
28M X 0	9.22	27.86	4.85	10349	9.36
100M X 0	4.58	35.66	4.65	9038	10.28
200M X 0	2.76	40.01	4.14	8291	9.98

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY [Signature]

APPROVED BY [Signature]



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 96, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-22-91
MASTER WARNER NO. 115651

C. G. IHC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID. ILLINOIS #5 RUN 91013002
#41001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 7/8/91

GROSS WEIGHT: 3833.4 KG

OTHER ID: LABORATORY SPLIT OF AS RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR COMPOSITE +3/8" SQ X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.11	1.79	2.04	14609	0.00	0.00
1.30	27.81	4.00	2.28	14367	0.00	0.00
1.35	32.23	9.13	2.62	13568	0.00	0.00
1.40	12.20	14.18	3.38	12730	0.00	0.00
1.60	8.62	18.99	5.82	11824	0.00	0.00
1.80	2.27	28.17	8.59	10038	0.00	0.00
2.00	1.47	39.83	10.30	7774	0.00	0.00
2.45	2.99	54.93	11.89	4899	0.00	0.00
2.45 SINK	9.30	72.59	18.15	2349	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +3/8" SQ X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.11	1.79	2.04	14609	0.00	0.00
1.30	30.92	3.78	2.25	14391	0.00	0.00
1.35	63.15	6.51	2.44	13971	0.00	0.00
1.40	75.35	7.75	2.59	13770	0.00	0.00
1.60	83.97	8.91	2.92	13570	0.00	0.00
1.80	86.24	9.41	3.07	13477	0.00	0.00
2.00	87.71	9.92	3.19	13382	0.00	0.00
2.45	90.70	11.41	3.48	13102	0.00	0.00
2.45 SINK	100.00	17.10	4.84	12102	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	17.10	4.84	12102	0.00	0.00
1.30	96.89	17.59	4.93	12021	0.00	0.00
1.35	69.08	23.06	6.00	11077	0.00	0.00
1.40	36.85	35.24	8.96	8899	0.00	0.00
1.60	24.65	45.66	11.73	7002	0.00	0.00
1.80	16.03	60.01	14.91	4410	0.00	0.00
2.00	13.76	65.26	15.96	3481	0.00	0.00
2.45	12.29	68.30	16.63	2969	0.00	0.00
2.45 SINK	9.30	72.59	18.15	2349	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Robert Thurman



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Galfitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 96, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-22-91
 MASTER WARNER NO. 115651

C. G. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN 91013002
 #41001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 7/8/91

GROSS WEIGHT: 3833.4 KG

OTHER ID: LABORATORY SPLIT OF AS RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE +3/8"SQ

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	24	3.25	2.06	14514	0.00	0.00
1.30	30.15	4.23	2.27	14343	0.00	0.00
1.35	37.47	9.57	2.63	13514	0.00	0.00
1.40	12.97	14.72	3.56	12651	0.00	0.00
1.60	6.90	20.15	7.59	11616	0.00	0.00
1.80	1.85	30.65	11.32	9601	0.00	0.00
2.00	1.67	40.49	11.98	7596	0.00	0.00
2.45	2.78	51.34	13.95	5584	0.00	0.00
2.45 SINK	5.96	62.48	28.98	3845	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +3/8"SQ

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	24	3.25	2.06	14514	0.00	0.00
1.30	30.40	4.22	2.27	14344	0.00	0.00
1.35	67.87	7.18	2.47	13886	0.00	0.00
1.40	80.84	8.39	2.64	13688	0.00	0.00
1.60	87.74	9.31	3.03	13525	0.00	0.00
1.80	89.59	9.75	3.20	13444	0.00	0.00
2.00	91.26	10.32	3.36	13337	0.00	0.00
2.45	94.04	11.53	3.68	13108	0.00	0.00
2.45 SINK	100.00	14.57	5.19	12555	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	14.57	5.19	12555	0.00	0.00
1.30	99.76	14.59	5.19	12551	0.00	0.00
1.35	69.60	19.08	6.46	11774	0.00	0.00
1.40	32.13	30.17	10.92	9745	0.00	0.00
1.60	19.16	40.63	15.91	7778	0.00	0.00
1.80	12.26	52.15	20.59	5619	0.00	0.00
2.00	10.41	55.98	22.24	4910	0.00	0.00
2.45	8.74	58.94	24.20	4397	0.00	0.00
2.45 SINK	5.96	62.48	28.98	3845	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Robert Shuman



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-22-91
MASTER WARNER NO. 115651

G. O. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN 91013002
#41C01

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:
SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 7/8/91

GROSS WEIGHT: 3833.4 KG

OTHER ID: LABORATORY SPLIT OF AS RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 3/8"SQ X 28M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.11	1.97	2.11	14717	0.00	0.00
1.30	28.02	3.88	2.30	14389	0.00	0.00
1.35	31.56	8.91	2.63	13597	0.00	0.00
1.40	12.49	14.25	3.31	12726	0.00	0.00
1.60	9.18	19.89	5.63	11684	0.00	0.00
1.80	2.09	30.67	9.29	9548	0.00	0.00
2.00	1.16	42.17	10.51	7364	0.00	0.00
2.45	3.00	55.71	11.33	4618	0.00	0.00
2.45 SINK	9.39	74.37	15.47	2126	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 3/8"SQ X 28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	3.11	1.97	2.11	14717	0.00	0.00
1.30	31.14	3.69	2.28	14422	0.00	0.00
1.35	62.70	6.32	2.46	14007	0.00	0.00
1.40	75.18	7.64	2.60	13794	0.00	0.00
1.60	84.36	8.97	2.93	13565	0.00	0.00
1.80	86.45	9.49	3.08	13468	0.00	0.00
2.00	87.61	9.93	3.18	13387	0.00	0.00
2.45	90.61	11.44	3.45	13097	0.00	0.00
2.45 SINK	100.00	17.35	4.58	12067	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	17.35	4.58	12067	0.00	0.00
1.30	96.89	17.85	4.66	11981	0.00	0.00
1.35	68.86	23.53	5.62	11001	0.00	0.00
1.40	37.30	35.89	8.14	8805	0.00	0.00
1.60	24.82	46.78	10.58	6832	0.00	0.00
1.80	15.64	62.56	13.48	3985	0.00	0.00
2.00	13.55	67.48	14.13	3126	0.00	0.00
2.45	12.39	69.85	14.47	2729	0.00	0.00
2.45 SINK	9.39	74.37	15.47	2126	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE: 7-22-91
MASTER WARNER NO. 115651

C. G. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN 91013002
#41001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 7/8/91

GROSS WEIGHT: 3833.4 KG

OTHER ID: LABORATORY SPLIT OF AS RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	31.34	1.50	1.97	14501	0.00		0.00
1.30	15.52	4.02	2.30	14247	0.00		0.00
1.35	13.39	7.32	2.54	13694	0.00		0.00
1.40	7.57	11.68	2.85	12978	0.00		0.00
1.60	10.66	18.65	3.52	11803	0.00		0.00
1.80	2.14	30.57	5.41	9704	0.00		0.00
2.00	1.05	42.65	7.48	7513	0.00		0.00
2.45	2.38	59.88	8.90	4460	0.00		0.00
2.45 SINK	15.96	77.24	15.65	1524	0.00		0.00

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	31.34	1.50	1.97	14501	0.00		0.00
1.30	46.86	2.34	2.08	14417	0.00		0.00
1.35	60.25	3.44	2.18	14256	0.00		0.00
1.40	67.82	4.36	2.26	14114	0.00		0.00
1.60	78.48	6.30	2.43	13800	0.00		0.00
1.80	80.62	6.95	2.51	13691	0.00		0.00
2.00	81.67	7.41	2.57	13612	0.00		0.00
2.45	84.04	8.89	2.75	13353	0.00		0.00
2.45 SINK	100.00	19.80	4.81	11466	0.00		0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	100.00	19.80	4.81	11466	0.00		0.00
1.30	68.66	28.15	6.10	10080	0.00		0.00
1.35	53.14	35.19	7.21	8863	0.00		0.00
1.40	39.75	44.58	8.79	7235	0.00		0.00
1.60	32.18	52.32	10.19	5884	0.00		0.00
1.80	21.52	69.00	13.49	2953	0.00		0.00
2.00	19.38	73.24	14.38	2208	0.00		0.00
2.45	18.33	74.99	14.78	1904	0.00		0.00
2.45 SINK	15.96	77.24	15.65	1524	0.00		0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

Robert Shuchan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE : 7-22-91
MASTER WARNER NO. 115651

C. G. I., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN 91013002
#41001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 7/8/91

GROSS WEIGHT: 3833.4 KG

OTHER ID: LABORATORY SPLIT OF AS RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.81	1.83	1.85	14715	0.00	0.00
1.30	29.16	2.06	1.89	14520	0.00	0.00
1.35	10.57	4.09	2.09	14263	0.00	0.00
1.40	7.47	7.14	2.17	13690	0.00	0.00
1.60	12.73	11.82	2.20	13079	0.00	0.00
1.80	5.38	16.90	2.65	12175	0.00	0.00
2.00	1.89	28.33	3.83	10076	0.00	0.00
2.45	2.16	58.54	6.24	5046	0.00	0.00
2.45 SINK	28.84	78.52	12.67	1070	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.81	1.83	1.85	14715	0.00	0.00
1.30	30.96	2.05	1.89	14531	0.00	0.00
1.35	41.53	2.57	1.94	14463	0.00	0.00
1.40	49.00	3.26	1.97	14345	0.00	0.00
1.60	61.73	5.03	2.02	14084	0.00	0.00
1.80	67.11	5.98	2.07	13931	0.00	0.00
2.00	69.00	6.59	2.12	13826	0.00	0.00
2.45	71.16	8.17	2.24	13559	0.00	0.00
2.45 SINK	100.00	28.46	5.25	9957	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	28.46	5.25	9957	0.00	0.00
1.30	98.19	28.95	5.31	9870	0.00	0.00
1.35	69.04	40.30	6.76	7906	0.00	0.00
1.40	58.47	46.85	7.61	6756	0.00	0.00
1.60	51.00	52.66	8.40	5741	0.00	0.00
1.80	38.27	66.25	10.46	3301	0.00	0.00
2.00	32.89	74.33	11.74	1848	0.00	0.00
2.45	31.00	77.12	12.22	1348	0.00	0.00
2.45 SINK	28.84	78.52	12.67	1070	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Robert Sheehan



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galtzert Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-22-91
MASTER WARNER NO. 115651

C. Q. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN 91013002
#41001

OPERATING CO.: PROJECT 90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 7/8/91

GROSS WEIGHT: 3833.4 KG

OTHER ID: LABORATORY SPLIT OF AS RECEIVED SAMPLE CRUSHED TO 3/4" X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	.31	1.60	1.83	14650	0.00		0.00
1.30	7.95	2.71	2.02	14373	0.00		0.00
1.35	9.28	3.29	1.92	14300	0.00		0.00
1.40	6.38	5.13	1.70	14115	0.00		0.00
1.60	19.13	8.35	1.30	13625	0.00		0.00
1.80	9.97	15.03	1.47	12446	0.00		0.00
2.00	4.22	26.68	2.09	10267	0.00		0.00
2.45	7.62	66.50	6.83	3189	0.00		0.00
2.45 SINK	35.14	83.86	7.36	808	0.00		0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	.31	1.60	1.83	14650	0.00		0.00
1.30	8.27	2.67	2.01	14383	0.00		0.00
1.35	17.55	3.00	1.96	14339	0.00		0.00
1.40	23.93	3.57	1.89	14279	0.00		0.00
1.60	43.05	5.69	1.63	13989	0.00		0.00
1.80	53.02	7.45	1.60	13699	0.00		0.00
2.00	57.24	8.86	1.64	13446	0.00		0.00
2.45	64.86	15.64	2.25	12241	0.00		0.00
2.45 SINK	100.00	39.61	4.04	8223	0.00		0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	100.00	39.61	4.04	8223	0.00		0.00
1.30	99.69	39.73	4.05	8203	0.00		0.00
1.35	91.73	42.94	4.23	7668	0.00		0.00
1.40	82.45	47.40	4.49	6921	0.00		0.00
1.60	76.07	50.94	4.72	6318	0.00		0.00
1.80	56.95	65.25	5.87	3864	0.00		0.00
2.00	46.98	75.91	6.80	2043	0.00		0.00
2.45	42.76	80.76	7.27	1232	0.00		0.00
2.45 SINK	35.14	83.86	7.36	808	0.00		0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

RAE/KL
Robert L. Kline



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-9000
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5285

DATE: 7-23-91
MASTER WARNER NO. 116031

C. G. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #41001

OPERATING CO.: PROJECT #90D0101 TASK 2.2
SAMPLED BY: CUSTOMER PROVIDED
MINE:
LOCATION:

DATE SAMPLED:

DATE RECEIVED: 071091

WEATHER:
GROSS WEIGHT: 757.80 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

CERTIFICATE OF ANALYSIS

		AS RECEIVED	DRY BASIS
MOISTURE	D2961 D3302 D3173	8.46%	XXX
VOLATILE MATTER	D3175	32.07%	35.04%
FIXED CARBON	D3172	44.07%	48.13%
ASH	D3174	15.40%	16.83%
SULFUR	D4239 METHOD 3.3	4.34%	4.74%
CARBON	D3178	61.93%	67.65%
HYDROGEN	D3178	4.31%	4.71%
NITROGEN	D3179	1.07%	1.17%
OXYGEN	D3176	4.49%	4.90%
BTU/LB	D2015	11163	12194
MAF BTU/LB			14661
LBS OF SO2 PER MILLION BTU			7.77
HARDGROVE GRINDABILITY INDEX	D409	61	
FORMS OF SULFUR	D2492		
PYRITIC SULFUR		2.71%	2.96%
SULFATE SULFUR		.09%	.10%
ORGANIC SULFUR		1.54%	1.68%
CHLORINE	D4208	.26%	.28%
EQUILIBRIUM MOISTURE	D1412	2.90%	



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

BLACK SEAL ANALYSIS

Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-22-91
WARNER NO. 116031

CERTIFICATE OF ANALYSIS (CONT.)

AS RECEIVED DRY BASIS

ASH FUSION TEMPERATURE(S)
D1857 - ELECTRIC METHOD REDUCING ATMOSPHERE

INITIAL DEFORMATION TEMPERATURE	1985
SOFTENING TEMPERATURE	2040
HEMISPHERICAL TEMPERATURE	2120
FLUID TEMPERATURE	2200

D1857

OXIDIZING ATMOSPHERE

INITIAL DEFORMATION TEMPERATURE	2285
SOFTENING TEMPERATURE	2340
HEMISPHERICAL TEMPERATURE	2400
FLUID TEMPERATURE	2435

ASH MINERAL COMPOSITION
D2795 D3682

SILICON DIOXIDE	38.89
ALUMINIUM OXIDE	12.15
FERRIC OXIDE	25.84
TITANIUM DIOXIDE	60
PHOSPHORUS PENTOXIDE	0.00
CALCIUM OXIDE	7.37
MAGNESIUM OXIDE	3.29
SODIUM OXIDE	58
POTASSIUM OXIDE	1.57
SULFUR TRIOXIDE	7.49
PERCENT SOLIDS	91.54%
LITHIUM OXIDE	43.1 ppm
MANGANESE DIOXIDE	0.19%

APPROVED BY [Signature]

APPROVED BY [Signature]

PAGE 2 OF 2



BLACK SEAL ANALYSIS

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-23-91
MASTER WARNER NO. 116031

C. Q., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 757.80 KG

DATE RECEIVED: 071091

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+3/8"SQ	2.68	1.99	15.91	5.63	12472	9.02	14831
3/8"SQ X 28M	81.52	2.14	15.51	4.57	12512	7.30	14807
28M X 100M	8.35	1.74	17.53	5.01	11957	8.37	14498
100M X 200M	2.53	1.80	23.89	5.56	10902	10.19	14325
200M X 0	4.91	3.14	36.23	4.17	9024	9.23	14150

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+3/8"SQ	2.68	15.91	5.63	12472	9.02
+3/8"SQ X 28M	84.20	15.52	4.60	12511	7.35
+3/8"SQ X 100M	92.56	15.70	4.64	12461	7.44
+3/8"SQ X 200M	95.09	15.92	4.66	12419	7.50
+3/8"SQ X 0	100.00	16.92	4.64	12252	7.57

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+3/8"SQ X 0	100.00	16.92	4.64	12252	7.57
3/8"SQ X 0	97.32	16.94	4.61	12246	7.52
28M X 0	15.80	24.36	4.84	10876	8.89
100M X 0	7.44	32.04	4.64	9662	9.60
200M X 0	4.91	36.23	4.17	9024	9.23

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY ROCK

APPROVED BY Robert Sheehan



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE: 7-23-91
MASTER WARNER NO. 116037

C. G. V. INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 757.80 KG

DATE RECEIVED: 071091

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR COMPOSITE +28M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.63	1.83	2.09	14695	0.00	0.00
1.30	28.61	3.78	2.33	14299	0.00	0.00
1.35	34.17	9.20	2.72	13572	0.00	0.00
1.40	10.38	14.53	3.40	12689	0.00	0.00
1.60	8.69	19.36	5.59	11801	0.00	0.00
1.80	2.35	25.13	7.78	10634	0.00	0.00
2.00	1.38	39.97	9.69	7835	0.00	0.00
2.45	2.84	56.09	11.62	4596	0.00	0.00
2.45 SINK	8.95	74.18	16.96	2116	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +28M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.63	1.83	2.09	14695	0.00	0.00
1.30	31.24	3.62	2.31	14332	0.00	0.00
1.35	65.41	6.53	2.52	13935	0.00	0.00
1.40	75.79	7.63	2.64	13765	0.00	0.00
1.60	84.49	8.84	2.95	13563	0.00	0.00
1.80	86.83	9.28	3.08	13483	0.00	0.00
2.00	88.21	9.76	3.18	13395	0.00	0.00
2.45	91.05	11.20	3.44	13121	0.00	0.00
2.45 SINK	100.00	16.84	4.65	12136	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	16.84	4.65	12136	0.00	0.00
1.30	97.37	17.24	4.72	12067	0.00	0.00
1.35	68.76	22.84	5.72	11139	0.00	0.00
1.40	34.59	35.33	8.68	8732	0.00	0.00
1.60	24.21	45.67	10.95	7036	0.00	0.00
1.80	15.51	60.41	13.95	4366	0.00	0.00
2.00	13.17	66.70	15.05	3248	0.00	0.00
2.45	11.79	69.82	15.68	2713	0.00	0.00
2.45 SINK	8.95	74.18	16.96	2116	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Robert H. Hudson



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galtzert Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE : 7-13-91
MASTER WARNER NO. 116037

C. G. & INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 757.80 KG

DATE SAMPLED:

DATE RECEIVED: 071091

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE +28M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.95	1.82	2.10	14702	0.00	0.00
1.30	28.16	3.92	2.32	14278	0.00	0.00
1.35	37.61	9.45	2.73	13552	0.00	0.00
1.40	10.81	15.22	3.52	12607	0.00	0.00
1.60	7.84	21.32	6.55	11504	0.00	0.00
1.80	1.73	29.86	10.92	9833	0.00	0.00
2.00	1.26	41.12	11.24	7626	0.00	0.00
2.45	2.74	53.66	12.22	4863	0.00	0.00
2.45 SINK	6.91	70.74	19.58	2614	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +28M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.95	1.82	2.10	14702	0.00	0.00
1.30	31.10	3.72	2.30	14318	0.00	0.00
1.35	68.71	6.86	2.54	13899	0.00	0.00
1.40	79.53	7.99	2.67	13723	0.00	0.00
1.60	87.37	9.19	3.02	13524	0.00	0.00
1.80	89.10	9.59	3.17	13452	0.00	0.00
2.00	90.35	10.03	3.28	13371	0.00	0.00
2.45	93.09	11.31	3.55	13121	0.00	0.00
2.45 SINK	100.00	15.42	4.66	12395	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	15.42	4.66	12395	0.00	0.00
1.30	97.05	15.83	4.73	12325	0.00	0.00
1.35	68.90	20.70	5.72	11527	0.00	0.00
1.40	31.29	34.22	9.31	9093	0.00	0.00
1.60	20.47	44.26	12.36	7237	0.00	0.00
1.80	12.63	58.50	15.97	4587	0.00	0.00
2.00	10.90	63.04	16.77	3756	0.00	0.00
2.45	9.65	65.90	17.49	3252	0.00	0.00
2.45 SINK	6.91	70.74	19.58	2614	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE: 7-23-91
MASTER WARNER NO. 116037

C. O., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 757.80 KG

DATE RECEIVED: 071091

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 28M X 100M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	22	2.06	2.15	14487	0.00		0.00
1.30	42.13	3.38	2.55	14417	0.00		0.00
1.35	20.75	6.92	2.65	13693	0.00		0.00
1.40	8.95	12.01	2.96	12877	0.00		0.00
1.60	9.91	18.31	3.93	11800	0.00		0.00
1.80	2.15	29.74	6.25	9766	0.00		0.00
2.00	1.12	42.24	8.13	7592	0.00		0.00
2.45	2.24	59.70	9.73	4394	0.00		0.00
2.45 SINK	12.54	75.00	16.96	1602	0.00		0.00

CUMULATIVE RESULTS FOR SIZE 28M X 100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	22	2.06	2.15	14487	0.00		0.00
1.30	42.35	3.37	2.55	14417	0.00		0.00
1.35	63.10	4.54	2.59	14179	0.00		0.00
1.40	72.04	5.47	2.63	14017	0.00		0.00
1.60	81.95	7.02	2.79	13749	0.00		0.00
1.80	84.10	7.60	2.88	13647	0.00		0.00
2.00	85.23	8.06	2.95	13568	0.00		0.00
2.45	87.46	9.38	3.12	13333	0.00		0.00
2.45 SINK	100.00	17.61	4.86	11862	0.00		0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	100.00	17.61	4.86	11862	0.00		0.00
1.30	99.78	17.64	4.86	11856	0.00		0.00
1.35	57.65	28.06	6.55	9985	0.00		0.00
1.40	36.90	39.95	8.74	7900	0.00		0.00
1.60	27.96	48.89	10.59	6308	0.00		0.00
1.80	18.05	65.68	14.24	3293	0.00		0.00
2.00	15.90	70.53	15.32	2418	0.00		0.00
2.45	14.77	72.69	15.87	2024	0.00		0.00
2.45 SINK	12.54	75.00	16.96	1602	0.00		0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

*Paul
Robertson*



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5285

DATE : 7-13-91
 MASTER WARNER NO. 116037

C. G. V. INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 757.80 KG

DATE SAMPLED:

DATE RECEIVED: 071091

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	4.83	1.97	1.93	14587	0.00	0.00
1.30	29.19	2.14	1.97	14473	0.00	0.00
1.35	16.68	4.38	2.20	14051	0.00	0.00
1.40	7.39	7.84	2.40	13437	0.00	0.00
1.60	12.32	13.86	2.67	12411	0.00	0.00
1.80	3.60	19.61	3.38	11420	0.00	0.00
2.00	1.44	33.52	5.46	9082	0.00	0.00
2.45	1.84	55.92	7.45	5228	0.00	0.00
2.45 SINK	22.70	77.34	14.77	1317	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	4.83	1.97	1.93	14587	0.00	0.00
1.30	34.02	2.12	1.97	14489	0.00	0.00
1.35	50.70	2.86	2.04	14345	0.00	0.00
1.40	58.09	3.50	2.09	14230	0.00	0.00
1.60	70.41	5.31	2.19	13911	0.00	0.00
1.80	74.02	6.01	2.25	13790	0.00	0.00
2.00	75.46	6.53	2.31	13700	0.00	0.00
2.45	77.30	7.71	2.43	13499	0.00	0.00
2.45 SINK	100.00	23.52	5.23	10733	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	23.52	5.23	10733	0.00	0.00
1.30	95.17	24.61	5.40	10538	0.00	0.00
1.35	65.98	34.55	6.92	8797	0.00	0.00
1.40	49.30	44.76	8.51	7018	0.00	0.00
1.60	41.91	51.26	9.59	5887	0.00	0.00
1.80	29.59	66.84	12.47	3169	0.00	0.00
2.00	25.98	73.40	13.73	2025	0.00	0.00
2.45	24.54	75.74	14.22	1610	0.00	0.00
2.45 SINK	22.70	77.34	14.77	1317	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE: 7-13-91
MASTER WARNER NO. 116037

C. O. , INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
 SAMPLED BY: CUSTOMER PROVIDED
 GROSS WEIGHT: 757.80 KG

DATE RECEIVED: 071091

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 3/8" X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	.20	1.91	1.94	14720	0.00		0.00
1.30	13.09	2.83	2.01	14219	0.00		0.00
1.35	7.07	3.77	2.02	14270	0.00		0.00
1.40	6.91	5.19	1.73	14064	0.00		0.00
1.60	19.35	8.46	1.37	13667	0.00		0.00
1.80	12.64	13.55	1.53	12648	0.00		0.00
2.00	3.82	33.64	2.56	8899	0.00		0.00
2.45	6.14	72.41	8.88	2582	0.00		0.00
2.45 SINK	30.77	85.63	7.72	859	0.00		0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	.20	1.91	1.94	14720	0.00		0.00
1.30	13.29	2.82	2.01	14227	0.00		0.00
1.35	20.37	3.15	2.01	14242	0.00		0.00
1.40	27.28	3.67	1.94	14197	0.00		0.00
1.60	46.63	5.65	1.70	13977	0.00		0.00
1.80	59.27	7.34	1.67	13693	0.00		0.00
2.00	63.09	8.93	1.72	13403	0.00		0.00
2.45	69.23	14.56	2.36	12444	0.00		0.00
2.45 SINK	100.00	36.43	4.01	8879	0.00		0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	100.00	36.43	4.01	8879	0.00		0.00
1.30	99.80	36.50	4.01	8867	0.00		0.00
1.35	86.71	41.58	4.31	8059	0.00		0.00
1.40	79.63	44.94	4.52	7507	0.00		0.00
1.60	72.72	48.72	4.78	6884	0.00		0.00
1.80	53.37	63.31	6.02	4425	0.00		0.00
2.00	40.73	78.76	7.41	1873	0.00		0.00
2.45	36.91	83.43	7.91	1145	0.00		0.00
2.45 SINK	30.77	85.63	7.72	859	0.00		0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

ROYCE
 Robert Sheehan



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693 7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE 7-18-91
MASTER WARNER NO. 116458

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 071291

GROSS WEIGHT: 412.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SQ2 PER MBTU	MAF BTU
+28M	4.40	1.84	21.35	5.80	11393	10.17	14485
28M X 100M	60.80	.99	15.46	4.36	12513	6.96	14801
100M X 200M	18.60	1.23	17.27	4.82	12057	7.99	14574
200M X 0	16.20	2.32	24.22	4.11	11027	7.45	14551

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SQ2 PER MBTU
+28M	4.40	21.35	5.80	11393	10.17
+28M X 100M	65.20	15.86	4.46	12438	7.16
+28M X 200M	83.80	16.17	4.54	12353	7.34
+28M X 0	100.00	17.48	4.47	12138	7.36

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SQ2 PER MBTU
+28M X 0	100.00	17.48	4.47	12138	7.36
28M X 0	95.60	17.30	4.41	12173	7.24
100M X 0	34.80	20.51	4.49	11578	7.75
200M X 0	16.20	24.22	4.11	11027	7.45

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY

APPROVED BY



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE : 7-18-91
MASTER WARNER NO. 116463

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 071291

GROSS WEIGHT: 412.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR COMPOSITE +100M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	1.53	1.28	1.84	14879	0.00		0.00
1.30	37.15	2.79	2.11	14513	0.00		0.00
1.35	19.96	7.83	2.45	13706	0.00		0.00
1.40	9.37	12.03	2.59	12979	0.00		0.00
1.60	14.38	17.82	3.30	12048	0.00		0.00
1.80	2.83	25.71	5.50	10459	0.00		0.00
2.00	1.07	37.04	9.03	8493	0.00		0.00
2.45	1.57	56.75	11.91	5280	0.00		0.00
2.45 SINK	12.14	74.59	15.72	1812	0.00		0.00

CUMULATIVE RESULTS FOR COMPOSITE +100M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	1.53	1.28	1.84	14879	0.00		0.00
1.30	38.68	2.73	2.09	14528	0.00		0.00
1.35	58.65	4.46	2.22	14248	0.00		0.00
1.40	68.01	5.51	2.27	14073	0.00		0.00
1.60	82.39	7.65	2.45	13720	0.00		0.00
1.80	85.22	8.25	2.55	13611	0.00		0.00
2.00	86.29	8.61	2.63	13548	0.00		0.00
2.45	87.86	9.47	2.80	13400	0.00		0.00
2.45 SINK	100.00	17.38	4.36	11993	0.00		0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	100.00	17.38	4.36	11993	0.00		0.00
1.30	98.47	17.63	4.40	11949	0.00		0.00
1.35	61.22	26.62	5.80	10395	0.00		0.00
1.40	41.35	35.69	7.41	8796	0.00		0.00
1.60	31.99	42.62	8.82	7571	0.00		0.00
1.80	17.61	62.86	13.33	3917	0.00		0.00
2.00	14.78	69.97	14.83	2665	0.00		0.00
2.45	13.71	72.55	15.29	2209	0.00		0.00
2.45 SINK	12.14	74.59	15.72	1812	0.00		0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas K. Light
RCK



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886 7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-18-91
MASTER WARNER NO. 116463

C. G., INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

SAMPLED BY: CUSTOMER PROVIDED

GROSS WEIGHT: 412.30 KG

DATE SAMPLED:

DATE RECEIVED: 071291

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE +100M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.03	1.27	1.83	14865	0.00	0.00
1.30	40.63	3.03	2.16	14474	0.00	0.00
1.35	22.13	9.01	2.59	13522	0.00	0.00
1.40	9.67	14.08	2.79	12654	0.00	0.00
1.60	12.07	21.31	4.08	11457	0.00	0.00
1.80	1.87	31.75	8.45	9590	0.00	0.00
2.00	.79	38.99	12.80	8208	0.00	0.00
2.45	1.27	53.86	14.30	5768	0.00	0.00
2.45 SINK	9.55	72.05	17.00	2035	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +100M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	2.03	1.27	1.83	14865	0.00	0.00
1.30	42.66	2.95	2.14	14493	0.00	0.00
1.35	64.78	5.02	2.29	14161	0.00	0.00
1.40	74.45	6.20	2.36	13965	0.00	0.00
1.60	86.52	8.30	2.60	13615	0.00	0.00
1.80	88.39	8.80	2.72	13530	0.00	0.00
2.00	89.19	9.07	2.81	13483	0.00	0.00
2.45	90.45	9.70	2.97	13375	0.00	0.00
2.45 SINK	100.00	15.65	4.31	12292	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	15.65	4.31	12292	0.00	0.00
1.30	97.97	15.95	4.36	12239	0.00	0.00
1.35	57.34	25.10	5.93	10655	0.00	0.00
1.40	35.22	35.20	8.03	8855	0.00	0.00
1.60	25.55	43.20	10.01	7416	0.00	0.00
1.80	13.48	62.80	15.31	3798	0.00	0.00
2.00	11.61	67.81	16.42	2864	0.00	0.00
2.45	10.81	69.92	16.69	2473	0.00	0.00
2.45 SINK	9.55	72.05	17.00	2035	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
RSK



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Garman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE : 7-18-91
MASTER WARNER NO. 116463

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:
SAMPLED BY: CUSTOMER PROVIDED
GROSS WEIGHT: 412.30 KG

DATE RECEIVED: 071291

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE 100M X 200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.92	1.31	1.89	15022	0.00	0.00
1.30	39.18	2.02	1.96	14712	0.00	0.00
1.35	17.44	5.67	2.20	14076	0.00	0.00
1.40	9.04	9.61	2.41	13362	0.00	0.00
1.60	13.75	17.32	3.11	12127	0.00	0.00
1.80	2.73	25.25	5.14	10595	0.00	0.00
2.00	.97	35.22	8.86	8926	0.00	0.00
2.45	1.18	50.25	13.08	6105	0.00	0.00
2.45 SINK	14.80	73.50	17.27	1709	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 100M X 200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	.92	1.31	1.89	15022	0.00	0.00
1.30	40.10	2.00	1.96	14719	0.00	0.00
1.35	57.55	3.11	2.03	14524	0.00	0.00
1.40	66.58	4.00	2.08	14366	0.00	0.00
1.60	80.33	6.28	2.26	13983	0.00	0.00
1.80	83.06	6.90	2.35	13872	0.00	0.00
2.00	84.03	7.23	2.43	13815	0.00	0.00
2.45	85.20	7.82	2.58	13708	0.00	0.00
2.45 SINK	100.00	17.54	4.75	11933	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	17.54	4.75	11933	0.00	0.00
1.30	99.08	17.69	4.78	11904	0.00	0.00
1.35	59.90	27.94	6.62	10068	0.00	0.00
1.40	42.45	37.09	8.44	8421	0.00	0.00
1.60	33.42	44.52	10.07	7084	0.00	0.00
1.80	19.67	63.53	14.92	3561	0.00	0.00
2.00	16.94	69.70	16.50	2426	0.00	0.00
2.45	15.97	71.79	16.96	2033	0.00	0.00
2.45 SINK	14.80	73.50	17.27	1709	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
R.A. Right



Gould Energy 30 Clairmont Avenue Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-18-91
MASTER WARNER NO. 116463

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 071291

GROSS WEIGHT: 412.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 28M X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	21	1.77	1.88	14680	0.00		0.00
1.30	20.84	2.53	2.03	14393	0.00		0.00
1.35	14.16	3.44	1.92	14338	0.00		0.00
1.40	8.53	5.62	1.87	13992	0.00		0.00
1.60	24.39	11.19	1.88	13175	0.00		0.00
1.80	6.79	19.22	2.39	11360	0.00		0.00
2.00	2.32	35.24	3.92	8679	0.00		0.00
2.45	3.24	63.99	7.65	4167	0.00		0.00
2.45 SINK	19.53	80.53	11.86	1463	0.00		0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	21	1.77	1.88	14680	0.00		0.00
1.30	21.05	2.52	2.03	14396	0.00		0.00
1.35	35.21	2.89	1.98	14373	0.00		0.00
1.40	43.74	3.42	1.96	14299	0.00		0.00
1.60	68.13	6.20	1.93	13896	0.00		0.00
1.80	74.92	7.38	1.97	13666	0.00		0.00
2.00	77.23	8.22	2.03	13517	0.00		0.00
2.45	80.47	10.47	2.26	13140	0.00		0.00
2.45 SINK	100.00	24.15	4.13	10860	0.00		0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED	CARBON
1.25	100.00	24.15	4.13	10860	0.00		0.00
1.30	99.79	24.19	4.14	10852	0.00		0.00
1.35	78.95	29.91	4.69	9918	0.00		0.00
1.40	64.79	35.70	5.30	8951	0.00		0.00
1.60	56.26	40.26	5.82	8187	0.00		0.00
1.80	31.87	62.49	8.83	4371	0.00		0.00
2.00	25.08	74.21	10.58	2479	0.00		0.00
2.45	22.77	78.17	11.26	1848	0.00		0.00
2.45 SINK	19.53	80.53	11.86	1463	0.00		0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Rye
Rye



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gormania, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-18-91
MASTER WARNER NO. 116535

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 071491

GROSS WEIGHT: 43.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

CERTIFICATE OF ANALYSIS

SCREEN SIZE	WT%	MOISTURE	ASH	SULFUR	BTU	LBS SO2 PER MBTU	MAF BTU
+100M	4.55	2.11	19.36	5.98	11739	10.18	14558
100M X 200M	37.08	17.86	15.35	4.86	12273	7.91	14498
200M X 0	58.37	2.48	18.13	4.41	11965	7.36	14615

CUMULATIVE RETAINED - DOWN

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+100M	4.55	19.36	5.98	11739	10.18
+100M X 200M	41.63	15.79	4.98	12215	8.15
+100M X 0	100.00	17.16	4.65	12069	7.70

CUMULATIVE RETAINED - UP

SCREEN SIZE	WT%	ASH	SULFUR	BTU	LBS SO2 PER MBTU
+100M X 0	100.00	17.16	4.65	12069	7.70
100M X 0	95.45	17.05	4.59	12085	7.59
200M X 0	58.37	18.13	4.41	11965	7.36

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS

PAGE 1

APPROVED BY

APPROVED BY



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.



GOULD Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE : 7-18-91
MASTER WARNER NO. 116539

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 071491

GROSS WEIGHT: 43.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR COMPOSITE +200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	73	1.84	2.05	14675	0.00	0.00
1.30	30.80	2.80	2.14	14589	0.00	0.00
1.35	21.13	4.45	2.25	13901	0.00	0.00
1.40	11.13	8.32	2.36	13676	0.00	0.00
1.60	16.38	15.30	2.72	12489	0.00	0.00
1.80	3.90	24.64	4.24	10772	0.00	0.00
2.00	1.45	36.72	7.11	8319	0.00	0.00
2.45	1.62	59.43	11.12	4942	0.00	0.00
2.45 SINK	12.87	74.87	17.00	1817	0.00	0.00

CUMULATIVE RESULTS FOR COMPOSITE +200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	73	1.84	2.05	14675	0.00	0.00
1.30	31.53	2.78	2.14	14590	0.00	0.00
1.35	52.66	3.45	2.18	14313	0.00	0.00
1.40	63.79	4.30	2.21	14202	0.00	0.00
1.60	80.17	6.55	2.32	13852	0.00	0.00
1.80	84.07	7.39	2.40	13709	0.00	0.00
2.00	85.52	7.88	2.48	13618	0.00	0.00
2.45	87.13	8.84	2.64	13457	0.00	0.00
2.45 SINK	100.00	17.34	4.49	11959	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	17.34	4.49	11959	0.00	0.00
1.30	99.27	17.45	4.51	11939	0.00	0.00
1.35	68.47	24.04	5.58	10748	0.00	0.00
1.40	47.34	32.78	7.06	9340	0.00	0.00
1.60	36.21	40.30	8.51	8008	0.00	0.00
1.80	19.83	60.94	13.29	4308	0.00	0.00
2.00	15.93	69.83	15.51	2725	0.00	0.00
2.45	14.48	73.14	16.35	2166	0.00	0.00
2.45 SINK	12.87	74.87	17.00	1817	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Riehl
Rocky



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 Warner Laboratories Division Gallitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
 Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
 Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
 St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
 Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34299 813/689-5785

DATE : 7-18-91
 MASTER WARNER NO. 116539

C. G. , INC.
 1 QUALITY CENTER BOX 280
 HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
 SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

MINE:

DATE SAMPLED:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 071491

GROSS WEIGHT: 43.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR SIZE +200M

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.47	1.91	2.06	14669	0.00	0.00
1.30	33.68	2.22	2.13	14643	0.00	0.00
1.35	21.13	6.01	2.34	14010	0.00	0.00
1.40	12.28	10.51	2.55	13283	0.00	0.00
1.60	14.62	19.75	3.24	11747	0.00	0.00
1.80	3.67	27.40	5.22	10407	0.00	0.00
2.00	1.05	38.49	10.17	8377	0.00	0.00
2.45	1.12	54.10	13.62	5797	0.00	0.00
2.45 SINK	10.98	70.27	21.04	2051	0.00	0.00

CUMULATIVE RESULTS FOR SIZE +200M

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	1.47	1.91	2.06	14669	0.00	0.00
1.30	35.15	2.21	2.13	14644	0.00	0.00
1.35	56.28	3.64	2.21	14406	0.00	0.00
1.40	68.56	4.87	2.27	14205	0.00	0.00
1.60	83.18	7.48	2.44	13773	0.00	0.00
1.80	86.85	8.33	2.56	13631	0.00	0.00
2.00	87.90	8.69	2.65	13568	0.00	0.00
2.45	89.02	9.26	2.79	13470	0.00	0.00
2.45 SINK	100.00	15.96	4.79	12216	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	15.96	4.79	12216	0.00	0.00
1.30	98.53	16.17	4.83	12179	0.00	0.00
1.35	64.85	23.41	6.23	10900	0.00	0.00
1.40	43.72	31.82	8.12	9397	0.00	0.00
1.60	31.44	40.14	10.29	7880	0.00	0.00
1.80	16.82	57.85	16.42	4519	0.00	0.00
2.00	13.15	66.36	19.54	2874	0.00	0.00
2.45	12.10	68.77	20.36	2397	0.00	0.00
2.45 SINK	10.98	70.27	21.04	2051	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Ricketts
 ROCKY



Gould Energy 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
Warner Laboratories Division Galitzin Road, P.O. Box 214, Cresson, Pennsylvania 16630 814/886-7400
Warner Laboratories of West Virginia Division Route 50 East, P.O. Box 98, Gorman, West Virginia 26720 304/693-7613
Fuel Engineering Division 30 Clairmont Avenue, Thornwood, New York 10594 914/769-7900
St. Louis Energy Division 11591 Page Service Drive, St. Louis, Missouri 63146 314/432-0414
Weighing and Control Services, Inc. P.O. Box 2374 Brandon, Florida 34209 813/689-5785

DATE : 7-18-91
MASTER WARNER NO. 116539

C. G., INC.
1 QUALITY CENTER BOX 280
HOMER CITY, PA 15748

SAMPLE ID: ILLINOIS #5 RUN #91013002
SAMPLER #410001

OPERATING CO.: PROJECT #90D0101 TASK 2.2

DATE SAMPLED:

MINE:

SAMPLED BY: CUSTOMER PROVIDED

DATE RECEIVED: 071491

GROSS WEIGHT: 43.30 KG

OTHER ID: LABORATORY SPLIT OF AS-RECEIVED SAMPLE CRUSHED TO 100M X 0

FEED FOR SIZE 200M X 0

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	20	1.47	2.02	14709	0.00	0.00
1.30	28.74	3.29	2.14	14542	0.00	0.00
1.35	21.14	3.34	2.18	13823	0.00	0.00
1.40	10.31	6.45	2.20	14009	0.00	0.00
1.60	17.63	12.67	2.40	12927	0.00	0.00
1.80	4.07	22.86	3.61	11007	0.00	0.00
2.00	1.73	35.95	5.79	8294	0.00	0.00
2.45	1.97	61.59	10.11	4595	0.00	0.00
2.45 SINK	14.21	77.40	14.77	1688	0.00	0.00

CUMULATIVE RESULTS FOR SIZE 200M X 0

CUMULATIVE DOWN

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	20	1.47	2.02	14709	0.00	0.00
1.30	28.95	3.28	2.14	14543	0.00	0.00
1.35	50.08	3.30	2.16	14239	0.00	0.00
1.40	60.39	3.84	2.17	14200	0.00	0.00
1.60	78.02	5.84	2.22	13912	0.00	0.00
1.80	82.09	6.68	2.29	13768	0.00	0.00
2.00	83.82	7.28	2.36	13655	0.00	0.00
2.45	85.79	8.53	2.54	13447	0.00	0.00
2.45 SINK	100.00	18.32	4.28	11776	0.00	0.00

CUMULATIVE UP

GRAVITY	% WT	% ASH	% S	BTU	VOLATILE	FIXED CARBON
1.25	100.00	18.32	4.28	11776	0.00	0.00
1.30	99.80	18.35	4.28	11770	0.00	0.00
1.35	71.05	24.45	5.15	10649	0.00	0.00
1.40	49.92	33.38	6.40	9305	0.00	0.00
1.60	39.61	40.39	7.50	8081	0.00	0.00
1.80	21.98	62.63	11.58	4193	0.00	0.00
2.00	17.91	71.65	13.39	2647	0.00	0.00
2.45	16.18	75.47	14.21	2043	0.00	0.00
2.45 SINK	14.21	77.40	14.77	1688	0.00	0.00

ANALYTICAL RESULTS ARE STATED ON A DRY BASIS



AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

Thomas A. Right
R. K. King